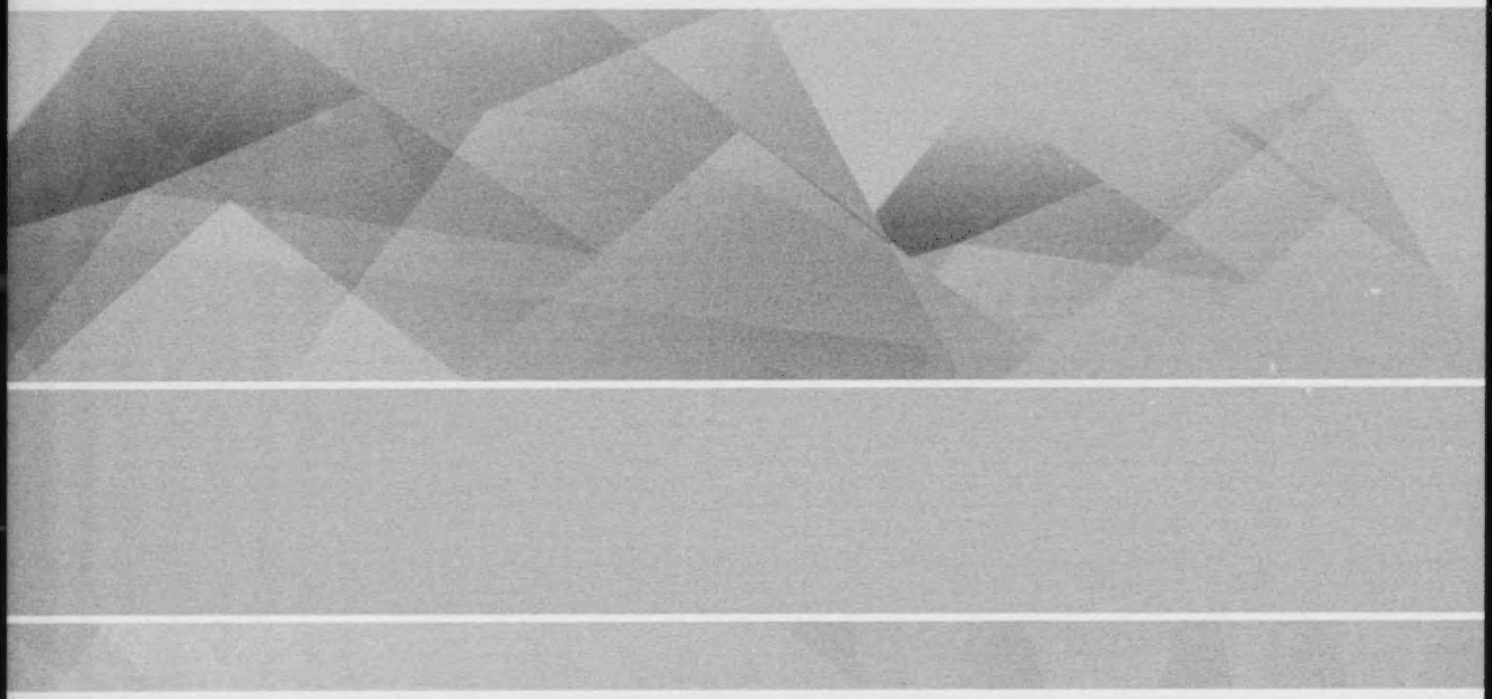
Teaching and Learning International Survey (TALIS) 2013

Alberta Report

Alberta
Government



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Executive Summary

Executive Summary

Background

The OECD Teaching and Learning International Survey (TALIS) is an international, large-scale survey of teachers and school principals that focuses on the working conditions of teachers and the learning environment in schools. TALIS aims to provide timely, comparable and useful information to help countries review and develop policies that support high-quality teaching.

The results of this survey fill an important knowledge gap for the province by putting Alberta-specific information in an international context. The TALIS survey also provides comprehensive, empirical and reliable information to support Ministry initiatives to explore new directions for enhancing the teaching environment.

The international target population for TALIS is composed of teachers and school leaders in mainstream public and private schools that have junior high school students (lower secondary in the international context). Thirty-four countries or economies participated in TALIS 2013. In each jurisdiction, a representative sample of up to 30 teachers and their school principals from 200 schools was selected for the study. Approximately 106,000 lower secondary teachers responded to the survey, representing more than 4 million teachers. Alberta is the only jurisdiction in Canada that participated in TALIS 2013. Overall, 1,773 teachers and 175 principals in 182 schools completed the online survey instrument in Alberta, indicating a strong interest in the survey themes by teachers and principals.

Survey themes

TALIS participating countries chose the following themes as the policy foci of TALIS 2013:

- teacher characteristics, including age and gender distribution, as well as teaching experience
- teacher training, including induction, mentorship and professional development
- school composition, school climate, resource allocation and school autonomy
- school leadership, including new indicators on distributed (team) leadership
- appraisal of and feedback to teachers
- teachers' pedagogical beliefs, attitudes and practices, including new indicators on the profile of student assessment practices
- teachers' reported feelings of self-efficacy, their job satisfaction and the climate in the schools and classrooms in which they work

Key findings

Demographic profile of teachers and school characteristics

1. Alberta teachers are highly educated compared to other countries. However, Alberta is one of the very few countries where the majority of teachers do not feel that their formal education and training covered the elements of content, pedagogy and practice for all the subjects they teach. Less than half of teachers report having received training in the content (44%) or the pedagogy (49%) of all of the subjects they teach.

2. Less-experienced teachers in Alberta are more likely to be on fixed-term contracts or to work part-time, out of necessity, than more-experienced teachers. Less-experienced teachers are also more likely to teach in schools where a significant proportion of students come from socioeconomically disadvantaged homes and in schools located in small towns.

3. Alberta seems to have sufficient numbers of teachers specialized to teach the various subjects, but teachers are not always assigned to teach the subjects in which they specialized. As a result, some teachers are teaching subjects they are not adequately trained for and others do not get to teach subjects in which they specialize. Between 47% and 71% of junior high school teachers who have specialized in teaching a particular subject, do not teach that subject. In Alberta, the proportion of junior high school teachers teaching various subjects without formal education or training in those subjects range from 4% for language arts to 37% for practical and vocational skills.

4. In Alberta, teachers are more likely to teach in schools with a high proportion of students with special needs or students of linguistic minorities. Junior high school teachers in Alberta are twice as likely as the international average to teach in schools where more than 10% of students have special needs or more than 10% of students have a first language that is different from the language of instruction.

5. The average class size (number of students reported by teachers) in Alberta is larger than the international average. However, teachers in Alberta have access to more support staff and administrative personnel in their schools compared to other countries.

6. Schools in Alberta have considerable autonomy in setting their budgets and in hiring teachers. However, Alberta is one of the TALIS participants in which schools have the least autonomy over teacher salaries and curriculum content.

7. The incidence of student absenteeism and lateness in Alberta schools is relatively high. Junior high school principals in Alberta report some of the highest rates of weekly student absenteeism (62%) and late arrivals (70%) among TALIS countries. However, the professional climate and student-teacher relations remain very positive.

Leadership

8. School principals in Alberta are highly educated and most of them have received training in both school administration and instructional leadership. They also believe that the training they received has given them the confidence and competencies they need as school leaders.

9. On average, a principal at a junior high school in Alberta spends a similar proportion of time (39%) on administrative and leadership tasks and meetings as the TALIS average (41%). The remainder of a principal's time is split between curriculum and teaching related tasks (23%, TALIS average 21%); student interactions (21%, TALIS average 15%) and parent interactions (12%, TALIS average of 11%)

10. Some leadership tasks are shared with the school management team, teachers and, to a lesser extent, school councils.

11. Junior high school principals in Alberta have a stronger focus on activities related to instructional leadership and devote less time than their international colleagues to "administrative' trivia."

12. Alberta's junior high school principals are generally satisfied with their jobs and believe that the advantages of the profession clearly outweigh the disadvantages. However, the majority believe that high workload and the level of job responsibilities limit their effectiveness as school principals.

Professional Development

13. Alberta teachers have better access to induction and mentoring programs to help them become competent and effective professionals than teachers in most other TALIS countries. However, Alberta is among the countries with a large gap between availability of and participation in induction programs. Even though 85% of teachers teach in schools where there are induction programs for teachers who are new to the school, or new to teaching, only 51% of the teachers have participated in such induction programs. The majority of teachers in Alberta teach in schools where the principal indicated that mentoring programs are available, but only about one-third of teachers participate in such programs.

14. Participation rates in professional development by junior high school teachers and school principals are very high in Alberta compared to other jurisdictions. However, the number of days spent by teachers and principals on professional development activities in Alberta is lower than the international average.

15. As in most TALIS countries, in Alberta support for professional development comes mainly in the form of scheduled time for activities rather than in the form of monetary supplement. Alberta is ranked fifth among TALIS participants in the provision of support for professional development in the form of scheduled time during regular working hours at school. Three-quarters of junior high school teachers in Alberta received support for professional development in the form of scheduled time off compared to the TALIS average is 54%.

16. Professional development activities for teachers in Alberta occur mostly as one-time or short-term events, rather than over an extended period of time.

17. Generally, the supply of professional development opportunities in Alberta, in terms of what is covered, seems to meet and exceed the demand in most areas. However, teachers who needed development in student career and guidance counselling and approaches to cross-occupational competencies, as well as teaching in multicultural settings, had the least opportunity to receive training on those topics.

18. Barriers that may be preventing teachers from engaging in more professional development activities include conflicts with work schedule, lack of incentives, lack of time due to family responsibilities, cost and lack of opportunities that are relevant to their development needs.

Feedback and formal appraisal

19. Overall, teachers in Alberta are more likely than their international counterparts to receive feedback from their school principal.

20. Teachers in Alberta usually receive feedback after an observation in their classroom or analysis of their students' test scores. They are less likely than their international counterparts to receive feedback from student surveys or from an assessment of their content knowledge.

21. Most teachers believe that formal appraisal and feedback are meant to help them improve their teaching, but many don't think it is having the desired impact.

22. Feedback may boost teachers' confidence, motivation and job satisfaction, but it is less likely to help teachers change classroom management practices, help them advance their careers or lead to any recognition, rewards or consequences.

23. Formal teacher appraisal in Alberta junior high schools is infrequent—mostly occurring less than once every two years. Moreover, a higher proportion of teachers in Alberta than in most TALIS countries teach in schools where there is no formal appraisal.

24. Formal teacher appraisal in Alberta is most likely to be based on direct observation of classroom teaching and less likely to involve student surveys about teaching.

25. Formal teacher appraisal in Alberta does not result in any consequences or recognition, apart from a discussion with teachers of measures to correct any weaknesses in teaching.

Teacher beliefs and practices

26. Alberta teachers use teaching practices that enable students to play a central role in the learning process. There is a strong agreement among teachers that their role is to facilitate inquiry in the student.

27. The amount of time junior high school teachers in Alberta spend on a variety of non-teaching tasks is similar to the TALIS average. However, teachers in Alberta teach about 36% more hours on average than teachers in other TALIS countries.

28. In a typical junior high school class in Alberta, a teacher spends about 20% of the time keeping order or performing administrative tasks.

29. Almost a third (29%) of junior high school teachers in Alberta indicate that they lose quite a lot of time because of students interrupting the lesson. However, Alberta classrooms appear no more disruptive overall than in other countries (or teachers have a different level of tolerance for disruptions). Teachers in some Asian countries (i.e., Korea, Singapore) are more likely to report classroom disruptions and to say they waste more time dealing with such disruptions than teachers in Alberta.

30. Alberta teachers are more likely to participate in collaborative professional learning than teachers in other TALIS countries.

Teachers' self-efficacy and job satisfaction

31. Alberta junior high school teachers believe strongly in their classroom management and instructional skills. They are less confident about their ability to motivate students who show low interest in school work. Only 61% (10 percentage points less than the TALIS average) said they could motivate students who show no interest in school work.

32. Alberta is among the countries where teachers express higher than average satisfaction with their current work environment and their profession, but 23% would prefer to change to another school and 35% doubt that they chose the right profession.

33. Teachers in Alberta express higher levels of satisfaction with their current work environment and their profession than in some of the high-performing Asian countries, such as Singapore, Korea and Japan, but not as high as in Finland.

34. Even though the majority of Alberta junior high school teachers are satisfied with their profession, many teachers believe that the teaching profession is not valued in Alberta society. While only 47% of junior high school teachers in Alberta believe that the teaching profession is valued in society, 90% agree that the advantages of being a teacher outweigh the disadvantages. Furthermore, 83% would choose to work as a teacher if they had to do it all over again. Teachers in other participating countries express similar sentiments.

35. Teachers' perceptions about how society values the teaching profession are shaped not just by what they experience outside the school, but also by what happens in the school, particularly by the sense that they are seen as valuable partners in the education system. In Alberta, teachers who teach in schools where the principal indicated that staff are provided with opportunities to actively participate in school decisions are almost 2.5 times more likely to agree that teaching is valued in society.

36. The number of years of teaching experience improves self-efficacy, but does not affect job satisfaction. While teachers in other TALIS countries typically become less satisfied with their profession the longer they work, Alberta's older and more experienced teachers are no less satisfied with their profession than their younger colleagues.

37. Teachers whose formal training covered all elements (content, pedagogy and practice) for all the subjects they teach, consistently show higher levels of self-efficacy and job satisfaction than those whose training did not cover all the elements for all the subjects they teach. These findings emphasize the importance of hiring teachers into jobs for which they are best prepared.

38. Class size does not affect teacher self-efficacy or job satisfaction in Alberta or in most other TALIS countries. TALIS data indicate that the type of students in a teacher's class may have a larger effect on teachers' self-efficacy and job satisfaction than the number of students in the class.

39. Teachers who spend more time keeping order in the classroom tend to have lower levels of self-efficacy; teachers who spend more class time on administrative tasks report lower levels of job satisfaction.

40. Teachers who teach in schools where staff are provided with opportunities to actively participate in school decisions report high levels of job satisfaction.

41. Junior high school teachers in Alberta who believe that formal appraisals are done largely to fulfil administrative requirements report lower levels of job satisfaction.

Acknowledgements

Alberta Education would like to thank all teachers and principals who kindly agreed to offer their valuable time and decided to take part in TALIS 2013. The thousands of hours you have collectively spent answering the TALIS 2013 questionnaire are an important investment that will help all stakeholders better understand issues of key importance to teachers and teaching. TALIS 2013 allowed Alberta to collect internationally comparable and statistically valid and reliable data on a number of issues on which we previously only had anecdotal evidence, or no evidence at all. In addition, we can put this data in an international context. We believe a great strength of TALIS is the fact that all the data collected in the participating countries are being made available to anyone interested in analyzing it. We hope that the design of the TALIS 2013 project will stimulate evidence-based conversations about how we in Alberta can continue to improve and strengthen the excellent teaching workforce that forms the foundation of Alberta's K-12 education system.

Alberta Education would also like to thank the Alberta Teachers Association (ATA), School Superintendents, and Board Chairs for their cooperation and support in making Alberta's participation in TALIS 2013 successful.

CHAPTER 1

Overview of TALIS

Overview of TALIS

The OECD Teaching and Learning International Survey (TALIS) is an international, large-scale survey that focuses on the working conditions of teachers and the learning environment in schools. TALIS aims to provide timely, comparable and useful information to help countries review and develop policies in support of high-quality teaching.

The first cycle of TALIS was conducted in 2008 and surveyed teachers and school leaders of lower secondary education in 24 countries. The initial report, *Creating Effective Teaching and Learning Environments: First Results from TALIS*, published in 2009, provided valuable insights that are still being used today.

TALIS 2013 has expanded to include additional countries (see Table 1.1). Alberta is the only Canadian jurisdiction to have participated in TALIS 2013.

TABLE 1.1 COUNTRIES PARTICIPATING IN TALIS 2013

OECD COUNTRIES

Australia*	Iceland*	Portugal*
Belgium (Flanders)	Israel	Slovak Republic*
Canada (Alberta)	Italy*	Spain*
Chile	Japan	Sweden
Czech Republic	Korea*	United Kingdom (England)
Denmark*	Mexico*	United States
Estonia*	Netherlands*	
Finland	Norway*	
France	Poland*	

PARTNER COUNTRIES

Brazil
Bulgaria*
Croatia
Cyprus
Latvia*
Malaysia*
Romania
Serbia
Singapore
United Arab Emirates (Abu Dhabi)

* Indicates countries that also participated in TALIS 2008

TALIS is a collaboration between participating countries, the OECD, teachers' unions and an international research consortium. It is an opportunity for teachers and school leaders to provide input that can inform educational policy analysis and development in key areas.

The overall objective of TALIS is to provide, in a timely and cost-effective manner, robust international indicators and policy-relevant analysis on teachers and teaching. The resulting data will allow countries to gain valuable insights into their respective teaching environments. These insights can help countries review and develop policies to promote conditions for effective teaching and learning. Cross-country analyses provide the opportunity to learn about different policy approaches in countries facing similar challenges and their impact on the learning environment in schools.

Recruiting, retaining and developing teachers is a priority in all school systems worldwide. To explore this priority, TALIS examines the ways in which teachers' work is recognised, appraised and rewarded. It assesses the degree to which teachers' professional development needs are being met. The study provides insights into the beliefs and attitudes about teaching that teachers bring to the classroom and the pedagogical practices that they adopt. Recognizing the important role that school leadership plays in fostering an effective teaching and learning environment, TALIS describes the role of school leaders and examines the supports that they provide to their teachers. Finally, TALIS examines the factors that contribute to teachers' feelings of job satisfaction and self-efficacy.

The results of this survey fill an important knowledge gap: they put this information in an international context and provide comprehensive, empirical and reliable information to support Alberta Education initiatives to explore new directions for excellence in teaching. TALIS also provides information about areas in teacher training and development that would require attention.

1.1 The population surveyed

The international sampling guidelines and other operational parameters applied in TALIS for the core (ISCED 2) survey are shown in Box 1.

BOX 1. THE TALIS DESIGN

International target population:	Lower secondary education (Grades 7–9 in Alberta context) teachers and the leaders of their schools.
Sample size:	200 schools per country, 20[1] teachers and one school leader in each school.
Within school samples:	Teachers within schools.
Target response rates:	75% of the sampled schools, aiming for a 75% response from all sampled teachers in the country. A school is considered responding if 50% of teachers sampled in that school responded.
Questionnaires:	Separate questionnaires for teachers and school leaders, each requiring between 45 and 60 minutes to complete.
Mode of data collection:	Questionnaires filled in on paper or online. (The vast majority of data collection in Alberta was conducted in the online mode).
Survey windows:	September to December 2012 for Southern Hemisphere countries and February to June 2013 for Northern Hemisphere countries. Data in Alberta were collected in March and April 2013.

1 Countries were encouraged to invite all teachers to respond to TALIS in schools in which there were fewer than 30 teachers teaching a particular ISCED level.

As with TALIS 2008, the focus of the second cycle was on teachers who teach in schools that have students in junior high grades (ISCED 2 of the 1997 revision of the International Standard Classification of Education, ISCED97) and their school leaders. TALIS 2013 also offered three international options to participating countries: surveying teachers and school leaders at elementary level (ISCED Level 1); surveying teachers and school leaders in senior high schools (ISCED Level 3); and surveying teachers in schools that participated in the Programme for International Student Assessment (PISA) (2012). Alberta participated only in the main study, which targeted teachers and principals of junior high students (ISCED 2). The criterion for selection was that the school had to have students in junior high grades. Some of the schools in our sample also had students in elementary grades.

TALIS was well received in Alberta by teachers and principals, and participation rates by far exceeded the minimum standard of 75% at both a school and individual teacher level for inclusion in the TALIS International Report. Two hundred Alberta schools were sampled by Statistics Canada[2] and 194 were eligible to participate. Out of the 194 eligible schools, 188 participated in the study yielding a response rate of 97%. In each school, one questionnaire was completed by the school principal and a different questionnaire was completed by randomly selected teachers in the school. Depending on school size, the number of teacher respondents in each school varied from 1 to 30. Overall, 1,773 teachers and 175 principals in 182 schools completed the online survey instrument in Alberta.

1.2 Definition of a teacher

TALIS defines a teacher as one whose primary or major activity in the school is student instruction, which involves the delivery of lessons to students. Teachers may work with students as a whole class, in small groups or one-to-one inside or outside regular classrooms. They might also share their teaching time among more than one school. For the purposes of TALIS, the definition of a teacher does not include the following school staff categories:

- Teacher aides: Non-professional or paraprofessional staff who support teachers in providing instruction to students
- Pedagogical support staff: Librarians, guidance counsellors and others who provide services to students to support the instructional program
- Health and social support staff: Health professionals such as doctors, nurses, psychiatrists, psychologists, occupational therapists and social workers

The following profiles of teachers are also excluded from the target population of teachers: substitute, emergency or occasional teachers; teachers teaching adults exclusively; and teachers on long-term leave. This exclusion has an important implication for reporting data on part-time teachers.

2 Statistics Canada was contracted by OECD to conduct the sampling for all participating countries.

1.3 Survey Themes

The countries participating in TALIS 2013 chose the themes for study in the second round of TALIS as part of an exercise rating their priority areas. Countries decided to retain some topics that were covered in TALIS 2008 and to add some new questions and indicators. The participating countries chose the following themes as the policy focus of TALIS 2013:

- School leadership, including new indicators on distributed, or team leadership.
- Teacher training, including professional development and new indicators on initial teacher education.
- Appraisal of teachers and feedback to teachers.
- Teachers' pedagogical beliefs, attitudes and their teaching practices, including new indicators on the profile of student assessment practices.
- Teacher's reported feelings of self-efficacy, their job satisfaction and the climate in the schools and classrooms where they work.

A conceptual framework was developed by subject-matter experts, the international research consortium and the OECD Secretariat and was approved by participating countries. The purpose of the conceptual framework was to steer development of the TALIS instruments and serve as a guide for future TALIS studies cycles.

It is important to stress that TALIS has not been developed as a tool that attempts to evaluate effectiveness of teachers. It is meant to gather information on specific aspects of the teaching and learning environment that contribute to positive student learning. The report recognizes that "effective" teaching and learning may include many other factors that cannot be examined through TALIS or any self-reported instrument. According to the OECD, effectiveness refers to the extent to which a given activity's stated objectives are met[3]. In the case of TALIS, effective teaching and learning environments are environments that enhance student learning. The factors, practices and conditions identified by participants in the priority-rating exercise, such as teacher appraisal and feedback, represent the elements that participants agree contribute to positive student learning.

An Instrument Development Expert Group (IDEG) was established to translate the policy priorities that had been agreed on by the participating countries into separate questionnaires for teachers and their school leaders. Considerable effort was devoted to achieving cultural and linguistic validity of the survey instruments. Stringent quality-assurance mechanisms were applied both for their translation and for the sampling and data collection (see the TALIS 2013 Technical Report for more details).[4]

3 OECD (2007), *Glossary of Statistical Terms*. Paris: OECD. Retrieved from: stats.oecd.org/glossary/index.htm
4 OECD (2014) TALIS Technical Report. http://www.oecd.org/edu/school/TALIS-technical-report-2013.pdf

1.4 Organization of the report

The following chapters present the analyses, results and potential policy implications emerging from TALIS 2013. The intent of the report is to profile teachers and school leaders and report on the conditions in which they work and the factors influencing their work. TALIS 2013 aims to provide a more complete picture of the teaching and learning environment in Alberta in comparison with participating countries.

- Chapter 2 presents a description of the characteristics of the junior high school teacher populations and the schools in which they work and provides a context for the later analytical chapters.
- Chapter 3 focuses on the key role played by school leaders in ensuring that teachers receive the support they need to be as effective as possible. It looks at the profile of leaders in these schools in supporting teachers to do their work.
- Chapter 4 looks at professional development as a tool to improve teaching. It studies the data on teachers' needs for and their experiences with professional development and its impact on their teaching.
- Chapter 5 examines the importance of the appraisal and feedback that teachers receive on their teaching along with the impact it has on their practice.
- Chapter 6 examines teachers' beliefs about student learning and instruction and the impact on their practices. It makes connections with many of the themes in previous chapters to show how beliefs influence the way a teacher teaches.
- Chapter 7 discusses teachers' feeling of self-efficacy and their levels of job satisfaction and how they are influenced by the various factors examined in the previous chapters.

CHAPTER 2

Profile of lower secondary teachers and the schools where they work

Profile of lower secondary teachers and the schools where they work

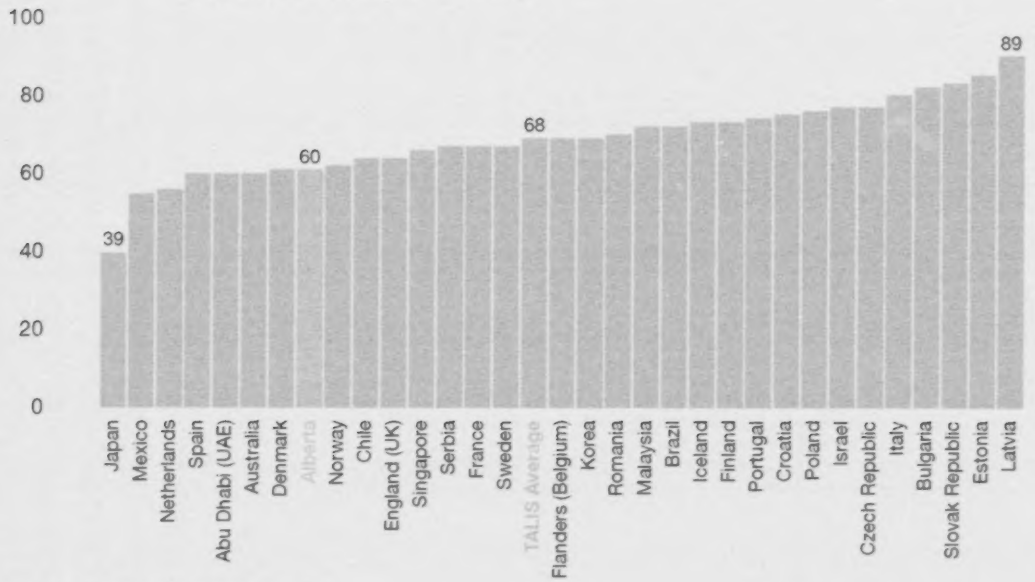
This chapter provides some insights into Alberta's teaching workforce and how it compares with other countries. It starts by describing the demographic characteristics such as the age and gender of teachers of lower secondary (junior high) schools, their employment status, their formal education and their work experience. Chapter 2 continues with a description of the characteristics of schools in which the teachers work. It also focuses on issues of equity in our education such as on the distribution of teachers in rural and urban areas or in schools deemed to be in more- or less-challenging environments. The chapter also looks at school sizes and human and material resources, as well as issues related to school climate and school autonomy.

2.1 Demographic profile

Teaching continues to be a female-dominated occupation

Figure 2.1 examines gender and age distribution of teachers who participated in TALIS 2013. The data show that in most countries the majority of teachers are female and Alberta is no exception. Sixty per cent of junior high teachers in Alberta are female. This percentage is slightly below the average (68%) for the countries that participated in TALIS 2013.

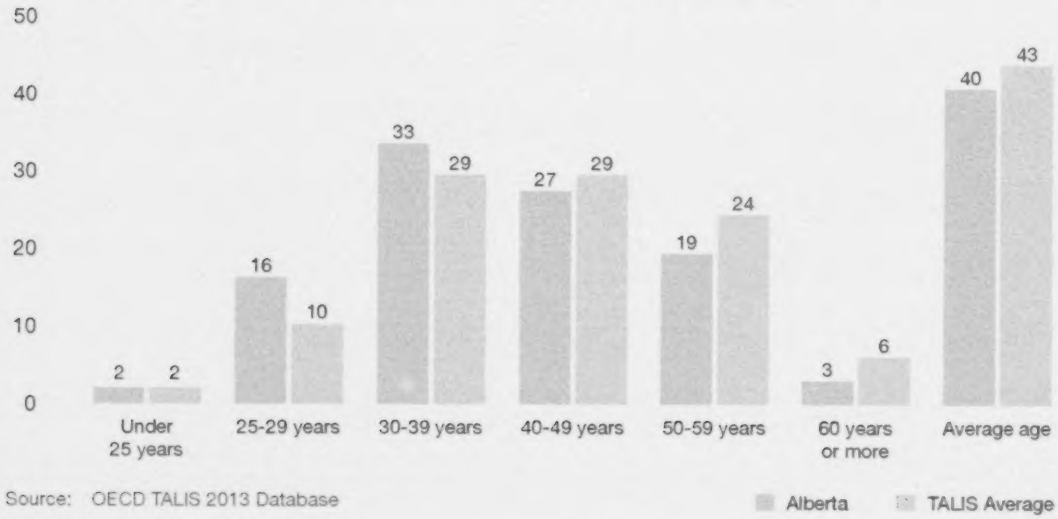
FIGURE 2.1 Percentage of female teachers in lower secondary schools in TALIS countries



Source: OECD TALIS 2013 Database

Post-communists countries such as Latvia (89%), Estonia (84%), Slovak Republic (82%) and Bulgaria (81%) have the highest percentage of female teachers in their workforce. At the other end of the spectrum is Japan—the only participating country that has fewer female teachers (39%) than male teachers at the junior high school level. The countries with similar gender composition as Alberta include Norway (61%), Demark (60%), Australia (59%) and Spain (59%). Korea (68%), Singapore (65%) and Finland (72%), who are traditionally high performers on PISA, have slightly higher proportions of female teachers at the junior high school level compared to Alberta. Other countries such as the Netherlands (55%) and Mexico (54%) have slightly smaller proportions of female teachers than Alberta.

FIGURE 2.2 Age distribution of junior high school teachers in Alberta



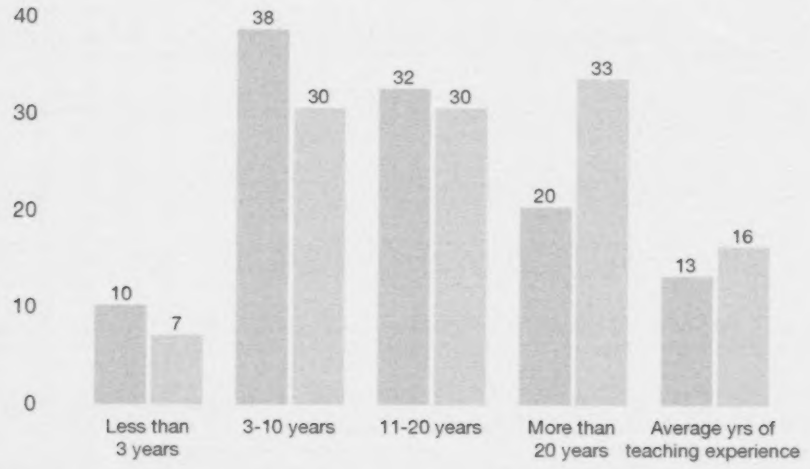
Source: OECD TALIS 2013 Database

Teachers in Alberta are younger and less experienced than the international average

Figure 2.2 shows the age distribution of junior high school teachers in Alberta. The average age is 40 years compared to the average of 43 years for TALIS countries. Alberta has the third lowest average age for lower secondary teachers among participating TALIS countries. Only 21% of junior high school teachers in Alberta are 50 years or older, and slightly over half (51%) are under 40 years old. These results show that Alberta, with its current age distribution of teachers, is in a better position than many other countries when it comes to concerns about an aging teacher population that may result in important staffing shortages in the near future. In other countries, such as Bulgaria, Estonia, Italy and Latvia, nearly half of the teachers are 50 years or older.

Figure 2.3 shows the distribution of years of working experience for junior high school teachers in Alberta. The average junior high school teacher has 13 years of teaching experience and has spent about seven years in her or his current school. On average across TALIS countries, teachers have 16 years of teaching experience and have spent about 10 years in their current school. Slightly over one third (37%) of all junior high school teachers in participating TALIS countries have 10 years or less of teaching experience, but in Alberta, almost half (48%) have 10 years or less of teaching experience. Alberta is therefore among the jurisdictions with the lowest average years of teaching experience. This finding is not surprising considering the fact that Alberta also has some of the youngest junior high school teachers among the participating TALIS countries/economies. The literature is also inconclusive when it comes to linking teaching experience with student learning outcomes.

FIGURE 2.3 Distribution of teachers by years of working experience for junior high school teachers in Alberta.



Source: OECD TALIS 2013 Database

The vast majority of teachers in Alberta who have employment contracts work full time.

Table 2.1 presents data on the employment status of junior high school teachers in Alberta compared to a selected number of TALIS countries.

TABLE 2.1 Employment status of lower secondary teachers in Alberta and selected TALIS countries

	Full-time (more than 90% of full-time hours)		Permanently employed		Fixed-term contract: More than 1 school year		Fixed-term contract: 1 school year or less	
	%	(S.E.)[1]	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**91**	**(1.1)**	**80**	**(1.3)**	**3**	**(0.4)**	**17**	**(1.2)**
Australia	84	(1.2)	87	(1.1)	4	(0.5)	9	(0.9)
Finland	94	(0.6)	77	(1.1)	4	(0.4)	19	(0.9)
Japan	96	(0.6)	80	(0.9)	6	(0.5)	14	(0.7)
Korea	99	(0.2)	83	(0.9)	12	(0.8)	5	(0.5)
Singapore	96	(0.3)	90	(0.5)	7	(0.5)	3	(0.3)
England (UK)	86	(0.9)	94	(0.5)	2	(0.3)	5	(0.5)
Flanders (Belgium)	75	(1.1)	83	(1.0)	4	(0.5)	13	(0.7)
TALIS Average	**82**	**(0.2)**	**83**	**(0.2)**	**6**	**(0.1)**	**12**	**(0.2)**

1 Numbers in parentheses are the standard errors of the estimated percentages.

Source: OECD TALIS 2013 Database

Eighty per cent of the teachers on contracts have permanent employment contracts while 17% are on fixed-term contracts of one school year or less. Across all TALIS countries, 82% of teachers are employed full time, and 82% are also employed on permanent contracts. Only 12% are on fixed-term contracts of less than one school year.

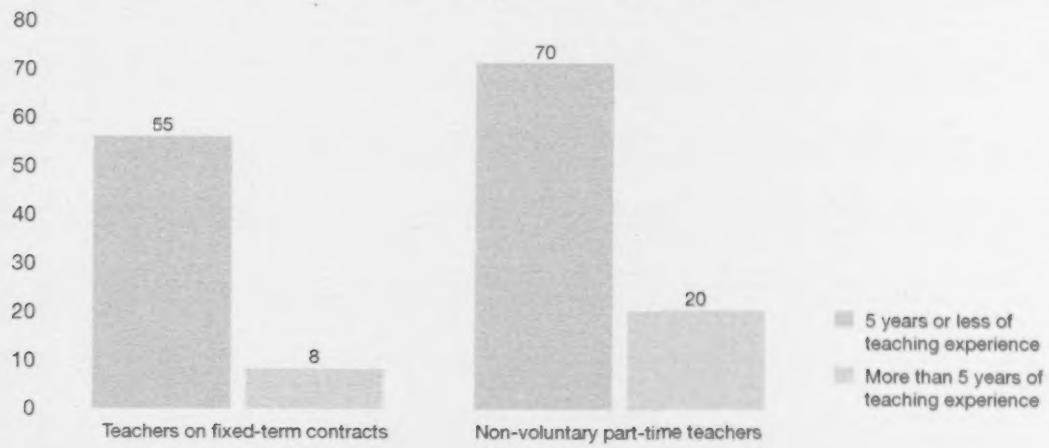
In Alberta, 91% of junior high school teachers who have employment contracts work full time. This percentage applies only to teachers who have either a permanent or fixed-term employment contract and does not include substitute teachers.[5]

5 According to Statistics Canada data, almost 30% of teachers in Alberta do not work full time. The majority of these would be substitute teachers.

More experienced teachers (more than five years of teaching experience) in Alberta are mostly employed full time with permanent employment contracts, while the majority of teachers with five years or less of teaching experience (55%) work on fixed-term contracts. These less experienced teachers also tend to work (70%) in non-voluntary part-time positions (Figure 2.4).

Judging by the numbers, it would be accurate to state that principals in Alberta seem to prefer to fill their human resources needs (teachers) by offering full-time positions rather than by creating part-time jobs. This is good in terms of retention for those teachers who have contracts, but it could also create a class of teachers who can only count on substitute jobs of uncertain length with uncertain income. The high attrition rates among young teachers may not necessarily be the result of burning out on the job, but perhaps of not finding a permanent job with income stability and career predictability. Employment status (as an indication of job security and flexibility) can be an important factor in attracting and retaining teachers to the profession.

FIGURE 2.4 Percentage of junior high school teachers in Alberta who have fixed-term contracts and those who work in non-voluntary part-time jobs grouped by teaching experience



Source: OECD TALIS 2013 Database

2.2 Education and Training

Alberta teachers are well educated

Table 2.2 shows the highest level of formal education completed by junior high school teachers in Alberta compared to the selected TALIS countries. The table presents the percentages of teachers with various levels of education, as defined by the International Standard Classification of Education (ISCED 1997), which identifies comparable levels of education across countries. Almost all (98%) junior high school teachers in Alberta have either a bachelor's degree or master's degree from a university. Alberta's percentage is above the TALIS average of 90%. About 1% have also completed ISCED level 6 (doctorate degree). Moreover, almost all teachers in Alberta have completed a teacher training program unlike some countries, such as Brazil, Serbia, Mexico and Czech Republic, which have a significant group of teachers whose bachelor's degrees are not in teaching.

TABLE 2.2 Highest level of formal education completed by lower secondary teachers in selected TALIS countries

	Highest level of formal education completed									
	Below ISCED Level 5 (High School or Some College)		ISCED Level 5B (College Diploma)		ISCED Level 5A (Bachelor's/ Master's Degree)		ISCED Level 6 (PhD/EdD)		Completion of teacher education or training program	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**0**	**(0.1)**	**1**	**(0.3)**	**98**	**(0.4)**	**1**	**(0.3)**	**98**	**(0.4)**
Australia	0	(0.1)	0	(0.0)	99	(0.2)	1	(0.2)	98	(0.3)
Brazil	4	(0.5)	2	(0.2)	93	(0.6)	0	(0.1)	76	(0.8)
Czech Republic	4	(0.4)	2	(0.3)	89	(0.6)	4	(0.4)	77	(0.8)
Finland	1	(0.2)	3	(0.4)	95	(0.5)	1	(0.3)	92	(0.7)
Japan	0	(0.0)	4	(0.4)	96	(0.4)	1	(0.2)	88	(0.7)
Korea	0	(0.1)	0	(0.1)	98	(0.3)	2	(0.3)	96	(0.3)
Mexico	9	(0.6)	1	(0.2)	89	(0.7)	1	(0.2)	62	(1.2)
Serbia	2	(0.3)	16	(0.8)	83	(0.8)	0	(0.0)	71	(1.0)
Singapore	2	(0.2)	6	(0.4)	92	(0.5)	0	(0.1)	99	(0.2)
England (UK)	1	(0.3)	2	(0.3)	95	(0.5)	2	(0.3)	92	(0.6)
Flanders (Belgium)	3	(0.3)	85	(0.8)	12	(0.8)	0	(0.1)	98	(0.3)
TALIS Average	**2**	**(0.1)**	**7**	**(0.1)**	**90**	**(0.1)**	**1**	**(0.0)**	**90**	**(0.1)**

Source: OECD TALIS 2013 Database

Teacher preparation programs in Alberta do not prepare teachers to teach all subjects that they teach

Table 2.3 and Figure 2.5 show the extent to which the elements of teaching (content, pedagogy, and practice) were included in the formal education and training for teachers in Alberta and other selected TALIS countries. Alberta is quite unusual in this regard because it is the only TALIS participant (with the exception of Spain for pedagogy) where less than half of teachers report that their formal education included elements for all subjects that they teach. In countries such as Korea and Poland, more than 90% of teachers reported that their formal education covered content, pedagogy and practice for all the subjects they teach.

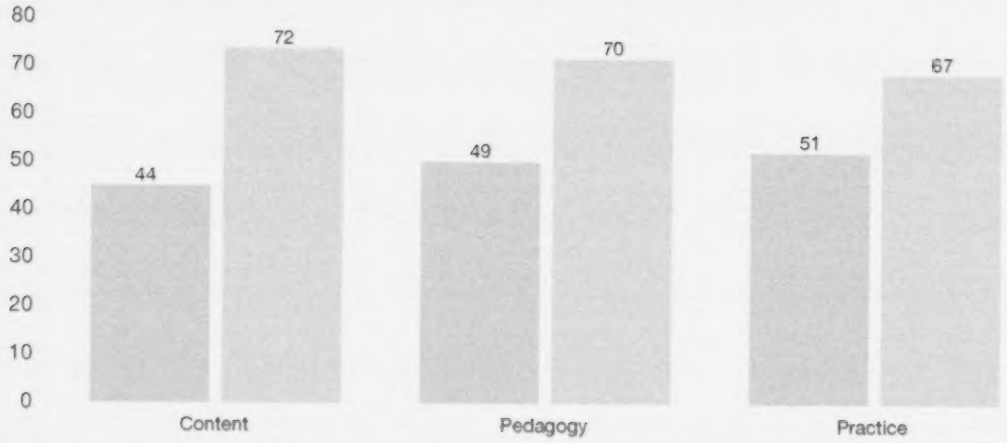
Less than half (44%) of junior high school teachers in Alberta report that their formal education included content for all the subjects they currently teach. About 49% indicated that their formal training covered the content for some of the subjects they teach but not all (Table 2.3). This indicates that there is a high proportion of teachers who are teaching at least some subjects whose content has not been specifically covered as part of their formal education. The results for all TALIS countries range from 42% to 95%, with an average of 72% of teachers receiving formal education that included content for all the subjects they currently teach.

TABLE 2.3 Elements of teaching included in teachers' formal education and training for selected TALIS countries

	Elements included in formal education and training									
	Content of the subject(s) being taught				Pedagogy of the subject(s) being taught				Practice in the subject(s) being taught			
	For all subjects being taught		For some subjects being taught		For all subjects being taught		For some subjects being taught		For all subjects being taught		For some subjects being taught	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**44**	**(1.6)**	**49**	**(1.5)**	**49**	**(1.5)**	**46**	**(1.5)**	**51**	**(1.4)**	**42**	**(1.4)**
Australia	62	(1.1)	31	(1.2)	64	(1.2)	31	(1.0)	70	(1.2)	27	(1.3)
Finland	77	(0.9)	19	(0.7)	75	(0.9)	21	(0.8)	69	(1.0)	25	(0.8)
Japan	71	(0.9)	27	(0.9)	68	(0.9)	30	(0.9)	69	(0.8)	28	(0.8)
Korea	90	(0.6)	9	(0.5)	84	(0.7)	13	(0.7)	79	(0.8)	13	(0.7)
Singapore	78	(0.7)	19	(0.7)	82	(0.7)	16	(0.7)	83	(0.7)	16	(0.7)
England (UK)	72	(1.1)	22	(1.3)	76	(1.0)	20	(1.0)	81	(0.9)	16	(0.9)
Flanders (Belgium)	77	(1.1)	17	(0.8)	80	(1.0)	15	(0.8)	78	(1.0)	16	(0.8)
TALIS Average	**72**	**(0.2)**	**23**	**(0.2)**	**70**	**(0.2)**	**23**	**(0.2)**	**67**	**(0.2)**	**22**	**(0.2)**

Source: OECD TALIS 2013 Database

FIGURE 2.5 The percentage of junior high school teachers in Alberta whose formal education and training included elements of content, pedagogy or practice for all the subjects they teach



Source: OECD TALIS 2013 Database

The proportion of junior high school teachers in Alberta whose formal education included pedagogy of all the subjects they teach is also among the lowest for all TALIS participants. In Alberta, 49% of junior high school teachers report having completed formal education that included pedagogy for all the subjects they teach and 46% for some of the subjects they teach. The results for all TALIS participants range from 43% to 95% for those whose training included pedagogy for all the subjects they teach.

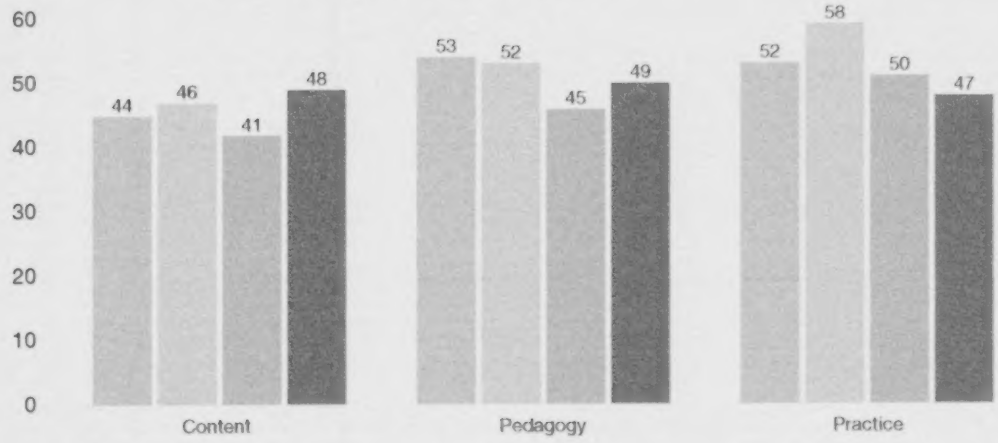
The proportions are similar for practical components of the training received by junior high school teachers in Alberta: 51% report that their formal education included practice in all the subjects they teach, while 42% report that it included practice in some of the subjects they teach. The TALIS averages are 67% for all subjects and 22% for some subjects.

A breakdown of responses by years of teaching experience did not show any consistent patterns that would suggest significant differences between more recent graduates and older teachers (Figure 2.6).

There are two plausible explanations for the pattern we see in Alberta regarding training in content, pedagogy and practice for the subjects they currently teach compared to other countries: one pertains to a deficiency in teacher preparation programs; and the other pertains to school-based practices of assigning teachers to jobs that do not best suit their skills and knowledge.

It stands to reason that teachers who only teach subjects whose content, pedagogy and practice were covered in their formal training would be better prepared for their jobs. The findings for Alberta show, therefore, that Alberta has some catching up to do in providing opportunities for all teachers to receive adequate training in all the subjects they might teach. The findings can also be interpreted to mean that Alberta schools could do a better job assigning teachers to teach subjects with which they are most familiar.

FIGURE 2.6 The percentage of junior high school teachers in Alberta whose formal education and training included elements of content, pedagogy or practice for all the subjects they teach, by years of teaching experience



Source: OECD TALIS 2013 Database 5 years or less 6-10 years 11-20 years More than 20 years

...but they feel well prepared for their work

Despite the shortcoming observed previously, the majority of Alberta teachers (89% to 90%) claim that their formal education prepared them well for their work as teachers. Few teachers (10% to 11%) feel inadequately prepared for some aspects of their teaching (i.e., content, pedagogy or practice), but the size of this group is close to the TALIS averages of 7% for content and 11% for both pedagogy and practice (Table 2.4).

It is also interesting to note that teachers from high-performing countries such as Finland, Japan, Korea and Singapore feel even less prepared for some aspects of their teaching than teachers in Alberta. This is even though a greater proportion of teachers in these countries reported that their formal training covered these elements for all the subjects they teach. For example in Korea, 17% of teachers don't feel well prepared from the content perspective, but 90% report that content was part of their preparation for all subjects they teach. In Finland, 77% report that their preparation covered the content of all subjects they teach (this is 33 percentage points higher than in Alberta), but 28% report being only somewhat or not at all prepared from the content perspective (compared to 11% in Alberta).

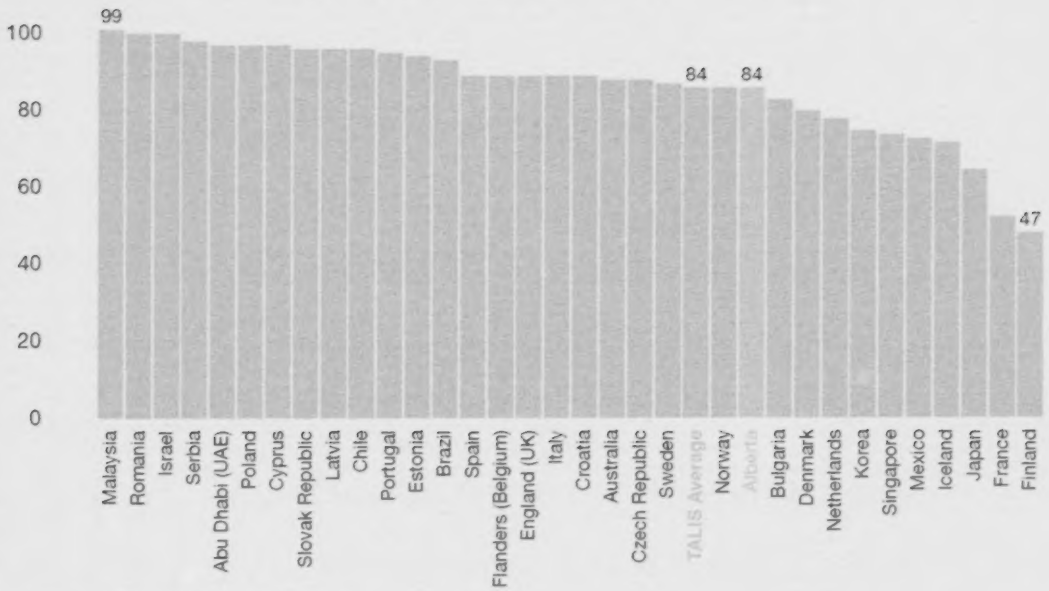
The proportion of teachers who feel prepared for all the elements also shows that Alberta is at the TALIS average and above Finland, Japan, Korea and Singapore (Figure 2.7). There are two plausible ways to interpret these results: either teachers in these countries are more critical about their own skills, or there are deficiencies in the programs these teachers took (perhaps, things were covered, but inadequately).

TABLE 2.4 Percentage of teachers from selected countries who do not feel prepared for content, pedagogy and practice in their teaching

	% of teachers feeling not at all prepared for the following elements of their teaching					
	Content		Pedagogy		Practice	
	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**11**	**(0.7)**	**11**	**(0.7)**	**10**	**(0.6)**
Australia	7	(0.8)	9	(0.8)	9	(0.9)
Finland	28	(1.1)	36	(0.9)	34	(0.9)
Korea	17	(0.7)	19	(0.7)	22	(0.8)
Japan	24	(0.9)	30	(1.0)	32	(0.9)
Singapore	14	(0.7)	20	(0.8)	21	(0.7)
England(UK)	7	(0.6)	10	(0.8)	7	(0.6)
Flanders (Belgium)	4	(0.4)	7	(0.6)	10	(0.6)
TALIS Average	**7**	**(0.1)**	**11**	**(0.1)**	**11**	**(0.1)**

Source: OECD TALIS 2013 Database

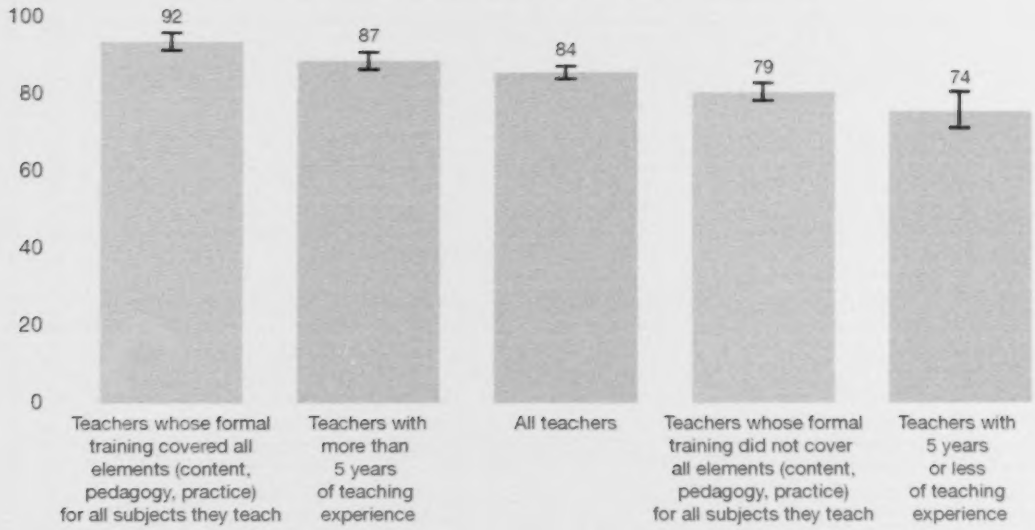
FIGURE 2.7 Percentage of teachers in lower secondary education who feel well or very well prepared for all elements (content, pedagogy, practice) for the subjects they teach



Source: OECD TALIS 2013 Database

In Alberta, teachers' feeling that they are well prepared is influenced by both the years of experience, and by whether or not their teacher preparation covered content, pedagogy and practice for all subjects they teach. Teachers with more than five years of experience feel better prepared, as do teachers whose preparation covered all three aspects for all of the subjects they teach. A significantly lower percentage was also observed for teachers with five years or less of teaching experience compared to those with more than five years of teaching experience. Also, a significantly lower percentage of teachers felt prepared for all the elements (content, pedagogy and practice) of the subjects they teach if their formal training did not cover all the elements (Figure 2.8). This pattern could be an indication that graduates from teacher preparation programs may not be receiving adequate training in all the subjects they teach, or they may be teaching more subjects for which they have inadequate formal training. We learned earlier on that less experienced teachers are also the ones who are likely to take involuntary part-time teaching jobs or accept short-term employment contracts. It is possible that they are also the ones who are likely to take jobs for which they were not so well prepared. Also, the lack of experience itself is a possible explanation.

FIGURE 2.8 Percentage of teachers feeling prepared for the subjects they teach by years of teaching experience and the extent to which teaching elements were covered in formal training



Source: OECD TALIS 2013 Database

TALIS performed country-level regression analyses to compare the likelihood of teachers who did or did not receive training in content, pedagogy and practice for all subjects they teach to feel prepared for these elements in their teaching. The analyses controlled for teacher gender, years of experience, level of education and subjects taught. Overall, the results for Alberta show that when content and pedagogy are included in teachers' formal education or training for all the subjects they teach, they are about five to nine times more likely to report feeling well prepared for teaching than those who did not receive any content or pedagogical training in the subjects they teach.

More than half of junior high school teachers in Alberta who have specialized in a subject don't teach that subject.

The study also examined the alignment between the education and training for teaching specific subjects and the subjects that teachers currently teach.

In general, the proportion of teachers who teach core subjects such as reading, writing, literature, mathematics, science and social studies is closely matched with the proportion of teachers who have specialized in these subjects as part of their teacher training education. However, depending on a subject matter, between 47% and 71% of teachers who have specialized in teaching a particular subject, do not teach that subject (Table 2.5).

Figure 2.9 compares the proportion of teachers in Alberta who are currently teaching subjects for which they received no formal education or training with TALIS averages. The proportion of teachers teaching various

subjects without formal education or training range from 4% of teachers teaching language arts (reading, writing and literature) to as high as 37% of teachers currently teaching practical and vocational skills. The graph shows that the issue of inadequate training appears to be relatively greater in Alberta for almost all subject areas with the exception of language arts, social studies, technology, and religion (and/or ethics). At the same time, a number of teachers have received formal education and training for subjects they are not currently teaching (Table 2.5).

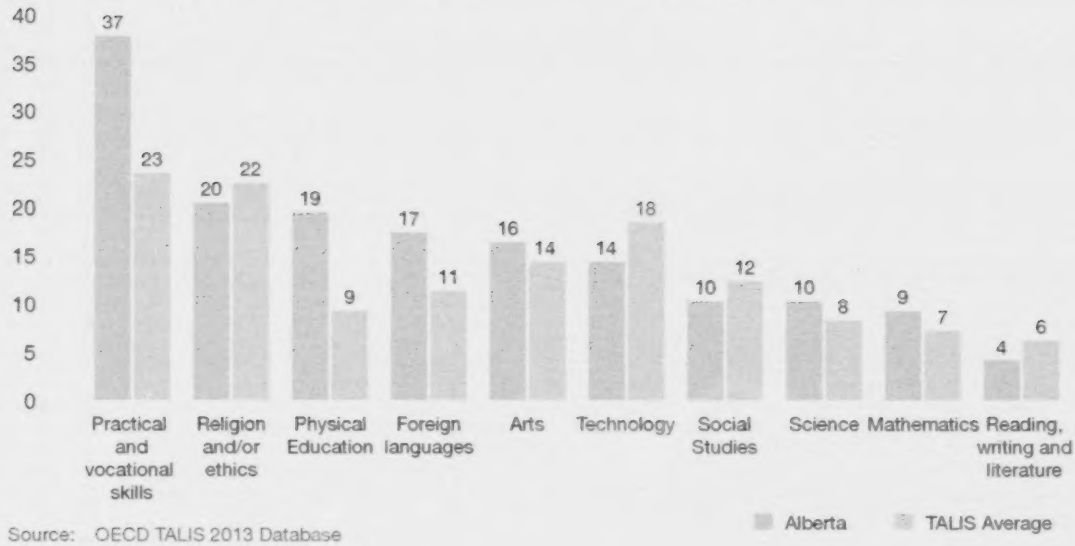
These results provide insight into several areas of teacher training and preparation, as well as into school level practices in terms of assigning teachers to their teaching duties. For example, the proportion of teachers receiving training in various subjects compared with the proportion of teachers currently teaching these subjects can reveal which areas are less emphasized in formal teacher training and which areas are over emphasized. In Alberta the proportion of teachers who specialized in teaching particular subjects closely matches the proportion of teachers currently teaching these same subjects. A potential concern is that a large proportion of teachers who have specialized in teaching particular subjects find themselves not teaching those subjects. Thus, it can be concluded that teacher training programs offer what is needed in the system, and that students in teacher preparation programs choose wisely. However, hiring and job assigning practices at the school level create significant mismatches between teachers' expertise and how the teachers are deployed. At the same time, it is also worrying that Alberta continues to have a small proportion of teachers in core subject matters (mathematics, literacy, science, arts) who claim to have no formal education in subjects that they teach, despite the fact that in the question about formal education the TALIS questionnaire also asked about in-service professional development. One would expect that professional development would be a way for teachers to address this issue. However, the data show that this is not happening: these teachers have been assigned to teach subjects for which they have no formal education, and they did not manage to address this deficiency through participation in appropriate professional development opportunities.

TABLE 2.5 Percentage of Alberta junior high school teachers with specialization in various subjects compared to the percentage of teachers teaching those subjects

	Currently teaching this subject		Specialized in this subject as part of teacher training		% with specialization in this subject but not currently teaching this subject	
	%	(S.E.)	%	(S.E.)	%	(S.E.)
Reading, Writing and Literature	41	(1.6)	39	(1.2)	47	2.3
Mathematics	30	(1.2)	26	(1.3)	54	2.5
Social Studies	33	(1.3)	32	(1.3)	51	2.5
Science	29	(1.2)	27	(1.2)	55	2.5
Arts	24	(1.3)	21	(1.0)	59	2.7
Religion and/or Ethics	15	(0.9)	15	(1.2)	71	3.6
Physical Education	28	(1.5)	24	(1.3)	55	2.6
Technology	25	(1.4)	25	(1.1)	67	2.5
Modern Foreign Languages	10	(0.6)	10	(0.8)	58	3.8
Practical and Vocational Skills	18	(1.0)	13	(1.0)	62	3.2

Source: OECD TALIS 2013 Database

FIGURE 2.9 Percentage of junior high school teachers in Alberta who did not receive any formal education or training in the subjects they are currently teaching compared to TALIS averages



Source: OECD TALIS 2013 Database

2.3 School Composition

Teachers work in schools that can vary greatly in terms of their location (rural or urban), their size and the characteristics of their student population. It is important to determine if teachers are equitably distributed across schools by their qualifications and experience in order to avoid discrepancies in educational opportunities for students. These three factors are also important aspects of teachers' work environment that can influence the quality of their teaching.

Teachers in Alberta are more likely to work in schools in which the characteristics of the student population can pose more challenges

Characteristics of students are an important indicator of some of the challenges that teachers may experience in their work. A teacher working in schools in which a significant proportion of students have special needs; whose native tongue is different from the language of instruction; or who come from socio-economically disadvantaged backgrounds will certainly face more challenges than a teacher in a school whose students do not have these characteristics.

To identify schools that can be classified as "disadvantaged", school principals were asked to estimate the proportion of students in their schools with certain characteristics. Schools are classified as being more challenging if the principal indicated that their school meets any one of the following criteria: (1) more than 10% percent of students whose native language is different than the language of instruction; (2) more than 10% of students who have special needs; or (3) more than 30% of students from socio-economically disadvantaged homes.

Table 2.6 shows the overall proportion of teachers who work in more challenging schools in Alberta compared to selected TALIS countries. About 20% of junior high school teachers in Alberta teach in schools with a significant proportion of students from socio-economically disadvantaged families. This percentage is the same as the TALIS average. However, the proportion of teachers teaching in schools with a high proportion of students with special needs (51%) and in schools in which at least 10% of students speak a language that is different than the language of instruction (41%) are almost twice as high as the TALIS averages. In countries such as Finland, Japan and Korea, the proportions of teachers teaching in these types of challenging schools are much smaller compared to Alberta.

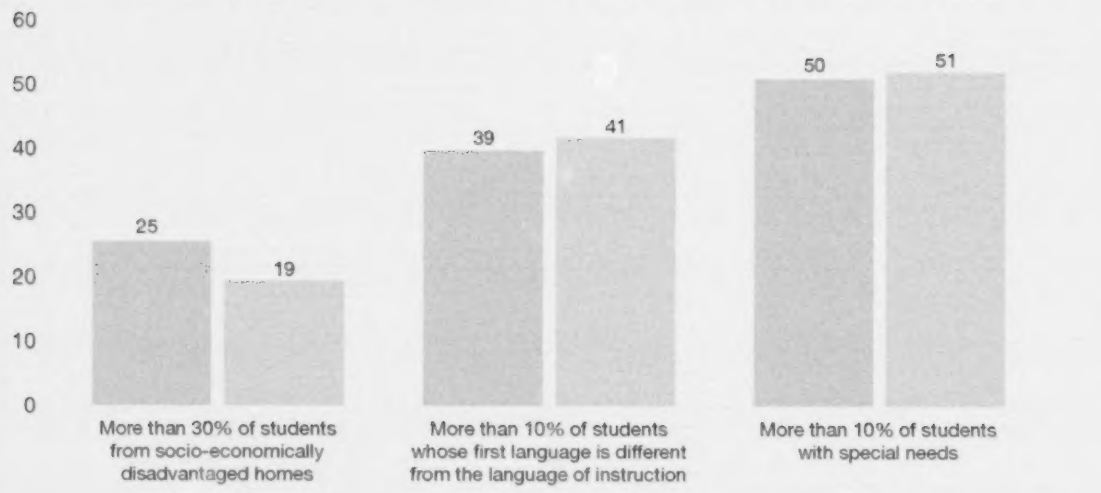
TABLE 2.6 Percentage of teachers working in disadvantaged schools in Alberta and selected TALIS countries

	Teachers working in schools with *more* than 10% of students whose first language is different from the language of instruction		Teachers working in schools with *more* than 10% of students with special needs		Teachers working in schools with *more* than 30% of students from socio-economically disadvantaged homes	
	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**41**	**(5.0)**	**51**	**(4.6)**	**20**	**(3.9)**
Australia	33	(5.0)	24	(4.5)	26	(3.8)
Finland	9	(2.4)	27	(3.6)	3	(1.8)
Japan	2	(1.0)	9	(2.0)	6	(1.8)
Korea	0	(0.0)	8	(2.3)	8	(2.3)
Singapore	89	(0.1)	1	(0.0)	6	(0.1)
England (UK)	28	(4.3)	67	(4.0)	24	(2.9)
Flanders (Belgium)	27	(3.6)	54	(4.6)	16	(2.9)
TALIS Average	**21**	**(0.5)**	**26**	**(0.6)**	**20**	**(0.5)**

Note: Numbers for a country do not need to add to 100% as the categories are not mutually exclusive, i.e., a school with more than 10% of students with special needs may also be a school with over 30% of students coming from disadvantaged homes.

Source: OECD TALIS 2013 Database

FIGURE 2.10 The proportion of experienced and less experienced teachers working in various categories of disadvantaged schools in Alberta



Source: OECD TALIS 2013 Database

Figure 2.10 shows the proportion of experienced and inexperienced teachers in disadvantaged schools in Alberta. The data show that schools that are disadvantaged because a significant proportion of their students have special needs or have a native tongue that is different from the language of instruction are not disadvantaged when it comes to composition of teachers in such schools. As we can see, the proportion of teachers with more than five years of experience who teach in such schools is no different than the proportion of teachers with less than five years of experience. However, a significantly higher proportion of less experienced teachers work in schools with more than 30% of students from socio-economically disadvantaged homes compared to experienced teachers. This indicates that experienced teachers in Alberta are not less likely to work in schools in which students' needs (special needs or linguistic needs) may pose above average challenges. However, some evidence suggests that more experienced teachers may be less likely than their less experienced colleagues to work in schools that have a large proportion of students from socio-economically disadvantaged backgrounds. As already discussed, the majority of beginning teachers work in non-voluntary part-time jobs and they are more likely to teach outside their field of expertise. Now there is evidence that they are more likely to work in schools in which students may have needs that are more difficult to address.

Results from logistic regression analysis on the distribution of teachers in more challenging schools based on years of experience as a teacher and on the highest level of education, while controlling for gender and subjects taught, confirm that less-experienced teachers teach in schools with higher proportions of students from socio-economically disadvantaged homes. The results show that teachers with more than five years of teaching experience are about 30% less likely than those with five years or less of teaching experience to teach in schools where a larger proportion of students are from socio-economically disadvantaged homes.

Less experienced teachers in Alberta are more likely to teach in smaller communities than in large cities

Analysis of PISA scores[6] showed that in most countries and economies students who attend schools in urban areas tend to perform at higher levels than other students. This relationship did not disappear even after accounting for differences in socio-economic status of students (typically a key determinant of student performance). An explanation that was proposed to explain this finding was that schools in urban settings are larger, tend to benefit from better educational resources and often enjoy greater autonomy in how they allocate those resources. TALIS data offers an opportunity to look at possibly the most critical educational resource at schools' disposal, experienced teachers, to assess whether teachers with more years of teaching tend to gravitate toward urban rather than rural areas.

Logistic regression analysis was performed to answer this question. Schools were divided into three categories:

- schools located in areas with less than 15,000 people (towns)
- schools located in areas with 15,000 to 100,000 people (small cities)
- schools located in areas with more than 100,000 people (large cities)

In the regression analysis, small cities and large cities were compared to the reference category "towns." The results show that teachers with less teaching experience are 20% more likely to teach in a small town than in a large city.

6 OECD (2013b), *PISA 2012 Results: Excellence Through Equity: Giving Every Student the Chance to Succeed (Volume II)*, PISA, OECD Publishing, Paris. dx.doi.org/10.1787/9789264201132-en

2.4 School Size and Class Size

Alberta schools are smaller, but the classes are larger

The ideal school size has been a topic of debate for over a century. In two recent reviews of empirical studies that researched the effects of school size on various student and organizational outcomes, smaller schools are concluded to be favoured. Some research also suggests that in larger schools teacher-student relations can be more difficult to develop, and socio-economically disadvantaged students or students with learning difficulties tend to be overlooked.[7,8] However, there are other studies that indicate that educating a student in a smaller school is more expensive compared to a large school.[9,10]

Table 2.7 shows the school sizes and number of students and teachers in schools of selected TALIS countries and the reported class sizes. Alberta's junior high school students attend relatively smaller schools (an average of 335 students) compared to most TALIS countries. The TALIS average school size is 546 students and ranges from 221 to 1251 students.

Alberta has the lowest among TALIS countries/economies of the average number of teachers per school (18). It also has one of the highest average student-teacher ratios (18 students for every teacher). Across all TALIS countries, the average student–teacher ratios vary from 8 to 19 students per teacher. The average class size reported by teachers for Alberta (26) is also above the TALIS average (24).[11] However, TALIS data illustrates the rather weak connection between class size and student performance on international assessments such as PISA. The average class size in Singapore is twice the size of the average class size in Finland, with the average class size in Alberta falling somewhere in the middle. Yet, both Singapore and Finland are among the top performers on PISA. Analysis in the latter parts of this report will shed some light on the "classroom management" issues in these countries. This analysis helps readers better understand whether larger classes are possible because students in Asian countries are more disciplined and easier to manage.

On average, there is one pedagogical support person for every four junior high school teachers in Alberta. This is the highest number of support personnel among TALIS participants. The TALIS average is 1 pedagogical support person for every 14 teachers, and the range is from 1 pedagogical support to between 4 and 60 teachers.

The ratio of teachers to school administrative or management personnel is also very high in Alberta compared to the other TALIS participants. On average, there is one administrative or management support person for every four teachers in Alberta compared to one for every six teachers across all TALIS countries.

7 Leithwood, K., and D. Jantzi (2009), "A review of empirical evidence of school size effects: A policy perspective," *Review of Educational Research*, Vol. 79, pp. 464–490.

8 Ready, D.D., V.E. Lee and K.G. Welner (2004), "Educational equity and school structure: School size, overcrowding and schools-within-schools," *Teachers College Record*, Vol. 106, pp. 1989–2014.

9 Barnett, R.R. et al. (2002), "Size, performance and effectiveness: Cost-constrained measures of best-practice performance and secondary-school size," *Education Economics*, Vol. 10, pp. 291–310.

10 Bowles, T.J., and R. Bosworth (2002), "Scale economies in public education: Evidence from school level data," *Journal of Education Finance*, Vol. 28, pp. 283–300.

11 The average class size data are reported by junior high school teachers and refer to a randomly chosen class they currently teach, while the average student to teacher ratio in a school is derived from the principal questionnaire.

TABLE 2.7 Reported school and class sizes for Alberta and selected TALIS countries

	Avg. No of Students	Avg. No of Teachers/ School	Student-Teacher ratio[1]	Avg. Class Size[2]	Teacher-Pedagogical Support Personnel Ratio	Teacher – Administrative Personnel Ratio
Alberta	**335**	**18**	**18**	**26**	**4**	**4**
Australia	814	67	13	25	8	4
Finland	348	33	10	18	8	12
Korea	567	32	15	32	9	4
Japan	357	24	20	31	12	6
Singapore	1251	91	14	36	12	3
England (UK)	890	67	14	24	4	3
Flanders (Belgium)	624	79	8	17	31	10
TALIS Average	**546**	**45**	**12**	**24**	**14**	**6**

1 The ratio of students to number of teachers in a school is derived from the principal questionnaire. The reported ratios are derived from the average for the entire school where these teachers teach, some of which may extend beyond junior high school.

2 The average class size data are reported by junior high school teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

Source: OECD TALIS 2013 Database

2.5 School Resources

Resources, as defined by TALIS, include teaching staff and material resources, such as instructional materials, computers or computer software. PISA, the OECD's Programme for International Student Assessment, shows that the stronger the principal's perception that resource shortages hinder instruction in the school, the lower student performance in that school.[12] This section investigates the relationship between school characteristics and resources issues for Alberta in comparison with other TALIS countries. The results from analysis of school resources for Alberta and other selected TALIS countries are presented in Tables 2.8 and 2.9.

Shortage of qualified teachers exist in some schools, but it is less of a problem in Alberta than for other survey participants

A shortage of qualified teachers appears to be a problem for some schools in Alberta. The principals of 30% of the teachers in Alberta reported that a shortage of qualified teachers hinder ("a lot" or "to some extent") their school's capacity to provide quality instruction.[13] However, this problem appears to be less severe in Alberta compared to other TALIS countries such as Japan (80%); Netherlands (71%); Singapore (50%); Australia (48%); and England (UK) (46%). The TALIS average is 38%, and it ranges from 13% in Poland to 80% in Japan.

TABLE 2.8 Shortage of teachers and support personnel: Percentage of teachers in lower secondary education whose principal reported that the following resource issues hinder the school's capacity ("a lot" or "to some extent") to provide quality instruction

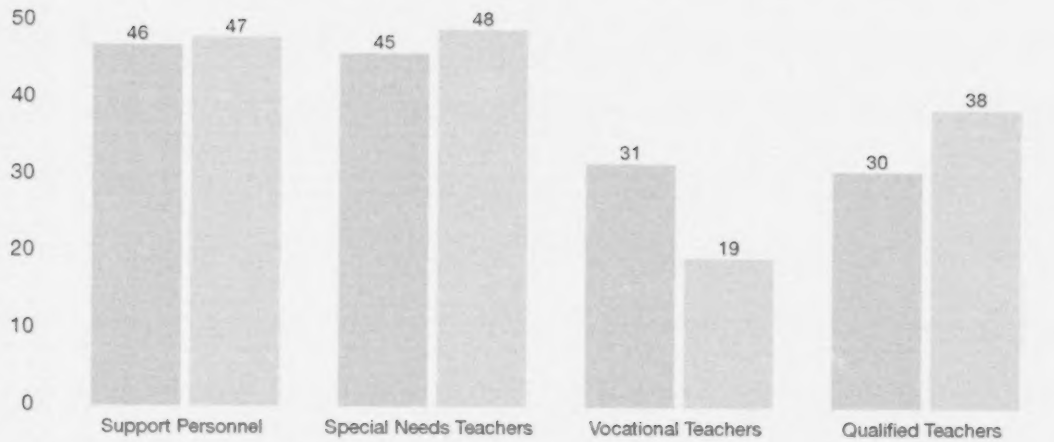
	Qualified Teachers		Special Needs Teachers		Vocational Teachers		Support Personnel	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**30**	**(4.4)**	**45**	**(5.1)**	**31**	**(4.2)**	**46**	**(4.8)**
Australia	48	(6.3)	37	(6.1)	28	(5.2)	28	(4.6)
Finland	17	(3.3)	56	(4.8)	5	(1.8)	51	(4.2)
Korea	37	(4.2)	50	(3.9)	36	(3.9)	55	(4.1)
Japan	80	(2.7)	76	(3.2)	37	(3.3)	72	(3.0)
Singapore	50	(0.3)	48	(0.3)	10	(0.1)	29	(0.2)
England (UK)	46	(4.4)	26	(3.7)	12	(3.0)	19	(3.7)
Flanders (Belgium)	33	(4.8)	43	(4.7)	22	(3.8)	45	(4.4)
TALIS Average	**38**	**(0.7)**	**48**	**(0.7)**	**19**	**(0.5)**	**47**	**(0.7)**

Source: OECD TALIS 2013 Database

12 OECD (2007), PISA 2006: Science Competencies for Tomorrow's World: *Volume 1: Analysis*, p. 263. PISA, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264201132-en

13 TALIS sampling was designed to produce a representative sample of teachers teaching students in junior high schools, and not a representative sample of schools. Consequently, when reporting data based on principals' responses, we can only talk about the proportion of teachers working in schools whose principals said x or y, but we cannot say that a particular answer is valid for an x% of schools in Alberta.

FIGURE 2.11 Shortage of teachers and support personnel: Percentage of junior high school teachers in Alberta whose principal reported that a shortage of the following resources hinder the school's capacity ("a lot" or "to some extent") to provide quality instruction compared to TALIS averages

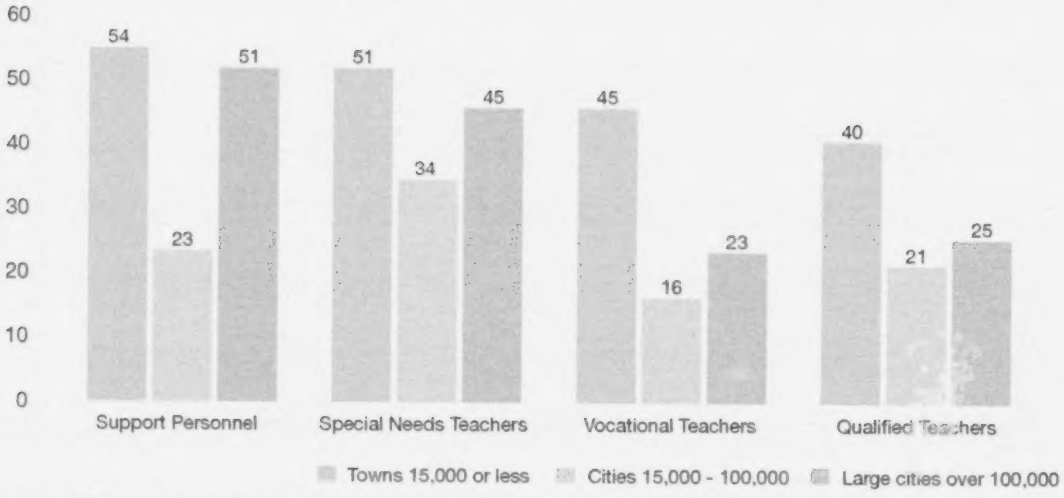


Source: OECD TALIS 2013 Database

Figure 2.11 shows that the areas of greatest need in Alberta are support personnel and teachers with competencies in teaching students with special needs. It also shows that these needs are typical when compared with other TALIS countries. At the same time, shortage of vocational teachers is, relatively speaking, more of an issue in Alberta.

Further analysis of the shortage of school resources by school location in Alberta revealed that teachers who teach in schools located in small towns are more likely to have their principal report that shortage of qualified teachers and vocational teachers hinder instruction (Figure 2.12). Interestingly, schools in smaller towns do not appear to differ from the schools in large urban centres when it comes to the reported impact of shortages of teachers specializing in teaching students with special needs or of support personnel. Also, principals of teachers working in cities with populations between 15,000 and 100,000 are the least likely to report that shortages of personnel is a barrier to providing quality instruction.

FIGURE 2.12 Shortage of teachers and support personnel: Percentage of junior high school teachers in Alberta whose principal reported that shortage of the following resources hinders the school's capacity ("a lot" or "to some extent") to provide quality instruction by school location



Source: OECD TALIS 2013 Database

Shortage of materials for instruction is even less of a barrier to quality of education in Alberta

Shortages of instructional materials, computers, software, Internet access and library materials were also identified as issues that can hinder schools' capacity to provide quality instruction. Surprisingly, about one third of junior high school teachers in Alberta teach in schools where a shortage of computers still remains an issue that hinders the capacity to provide quality instruction. In addition, about one quarter of teachers teach in schools where insufficient Internet access and inadequate computer software for instruction remain as issues that hinder quality instruction (Table 2.9 and Figure 2.13). Even though these percentages are slightly lower than the TALIS averages, this finding should be of concern, especially for computers and Internet access where Alberta has committed significant investment in projects such as the SuperNet. The Government of Alberta's vision is to make affordable global connectivity available to all Albertans regardless of whether they live in rural or urban areas through the SuperNet project.

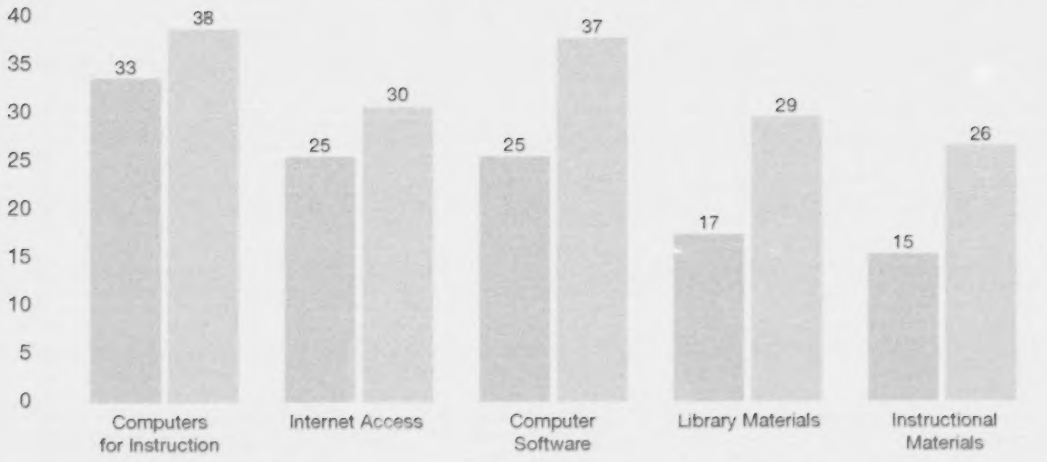
Also of interest is how principals in other high-performing countries perceive the impact of shortages on their schools' ability to provide quality instruction. At one end of the spectrum, Singapore has a very small proportion of teachers work in schools in which shortages of instructional materials, computers, software, Internet access or library materials are a significant barrier to instruction. At the other end of the spectrum, high-performing Finland has almost 50% of teachers working in schools in which a shortage of computers and computer software poses a barrier to quality instruction.

TABLE 2.9 Shortage of materials for instruction: Percentage of teachers in lower secondary education whose principal reported that the following resource issues hinder to "some extent" or "a lot" the school's capacity to provide quality instruction

	Instructional Materials		Computers for Instruction		Internet Access		Computer Software		Library Materials	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**15**	**(3.8)**	**33**	**(4.1)**	**25**	**(3.5)**	**25**	**(3.7)**	**17**	**(3.3)**
Australia	14	(3.9)	8	(2.3)	15	(3.2)	12	(3.5)	7	(1.9)
Finland	22	(4.2)	46	(4.4)	33	(4.2)	46	(4.1)	26	(4.1)
Korea	15	(2.6)	12	(2.8)	8	(2.0)	10	(2.4)	18	(3.4)
Japan	17	(2.8)	28	(3.4)	30	(3.7)	40	(3.6)	40	(3.6)
Singapore	1	(0.0)	4	(0.0)	6	(0.1)	7	(0.2)	5	(0.1)
England (UK)	13	(2.8)	22	(3.1)	15	(3.0)	14	(3.2)	18	(3.6)
Flanders (Belgium)	10	(2.5)	30	(4.4)	26	(4.4)	19	(3.8)	12	(2.7)
TALIS Average	**26**	**(0.6)**	**38**	**(0.7)**	**30**	**(0.6)**	**37**	**(0.6)**	**29**	**(0.6)**

Source: OECD TALIS 2013 Database

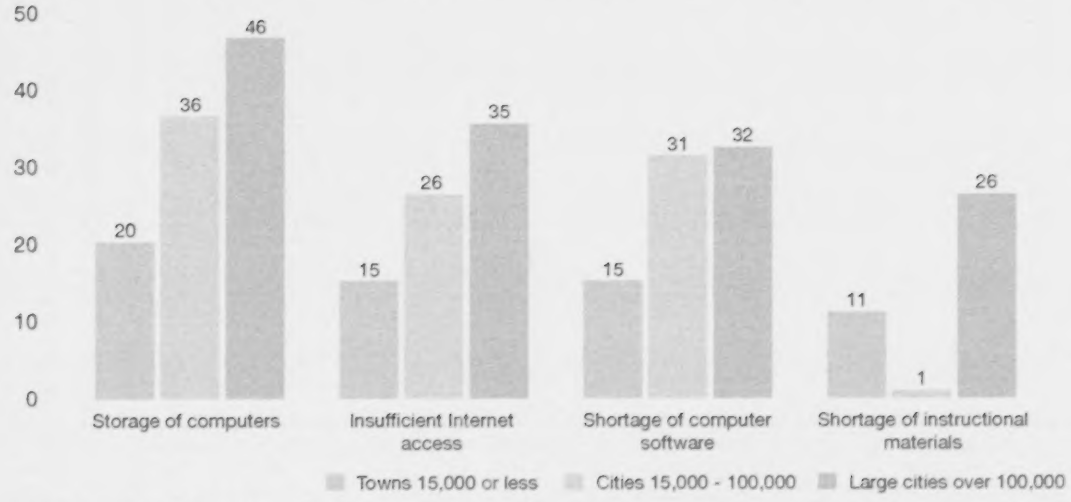
FIGURE 2.13 Shortage of materials for instruction: Percentage of junior high school teachers in Alberta whose principal reported that shortage of the following materials hinder the school's capacity ("a lot" or "to some extent") to provide quality instruction compared to TALIS averages



Source: OECD TALIS 2013 Database

Further analyses of availability of resources and how it differs by school location in Alberta show that compared to teachers working in small towns, teachers in large cities are more likely to work in schools where quality of instruction is limited by shortages of computers and computer software; insufficient Internet access; and shortage of other instructional materials (Figure 2.14). This finding is rather unexpected—one could expect that Internet access, for example, would be more of an issue in smaller communities, rather than in big cities. One possible explanation is that the perceived shortages reflect differences in the level of demand for these resources, rather than the availability of resources: It is possible that principals of schools located in small towns do not see the same level of benefit from using computers for teaching and learning as their colleagues in large cities. Consequently, even with the same level of availability of resources, they could be less likely to report shortages as a barrier to the provision of quality instruction in their schools. A further study would be required to answer this question.

FIGURE 2.14 Shortage of materials in Alberta schools: Percentage of junior high school teachers in Alberta whose principal reported that shortage of the following materials hinder the school's capacity ("a lot" or "to some extent") to provide quality instruction by school location



Source: OECD TALIS 2013 Database

2.6 School Climate

Student absenteeism and late arrivals are the most common issues

School climate determines the quality of school life. It includes factors such as safety issues (presence of bullying or verbal or physical abuse of teachers or students), late arrivals to school, absenteeism by teachers or students, cheating, criminal behaviours (vandalism or drug and alcohol possession or use) and discrimination. It also includes the quality of the relationships between staff and between staff and students, as well as the levels of co-operation, respect and sharing that are present.

Of all factors related to school climate that were assessed in TALIS 2013, weekly absenteeism and late arrival to school of students are by far the most commonly occurring problems across TALIS countries, including Alberta: 70% of junior high school teachers in Alberta work in schools whose principal reported that students arrive late on a weekly basis (Table 2.12). This puts Alberta among the TALIS countries with the highest incidence of lateness, together with Finland (87%); Sweden (78%); Netherlands (76%); and Chile (73%). The TALIS average is 52 % with a range of 20% to 87%.

Absenteeism is equally problematic in Alberta: 62% of junior high school teachers in Alberta work in schools whose principal reported that student absenteeism occurred at least weekly in their school. This places Alberta 3rd among TALIS participating countries/economies behind only Finland (67%) and Sweden (64%). The TALIS average is 61%, and the range is from 6% to 67%.

The next school climate issue, related to student behaviour, is intimidation and verbal abuse among students: 29% of Alberta junior high school teachers teach in schools where the principal identified verbal abuse among students as a problem that occurs on a weekly basis. This is also above the TALIS average of 16%.

Other factors such as cheating, vandalism, intimidation or verbal abuse of teachers or staff, violence, and drugs and alcohol use were not reported as major issues for Alberta as well as for most TALIS countries. However, at 6%, the proportion of teachers in Alberta working in schools whose principals reported weekly occurrences of students' possession and/or use of alcohol or drugs in school was higher than in all other participating countries, with the exception of Brazil. In most countries, no more than 1% of teachers worked in such schools.

When it comes to teacher-related factors, neither arriving late at school nor teacher absenteeism appear to be much of a concern. The proportion of teachers in Alberta working in schools whose principals reported that these issues occur at least once a week stood at 5%. However, while this number, when it comes to arriving late, is below the international average of 11% (the level that has been also reported by principals in Finland), Alberta stands out when it comes to teacher absenteeism—something that is almost unknown in the majority of TALIS countries.

TABLE 2.10 School climate—student-related factors: Percentage of teachers in lower secondary in selected TALIS countries whose principal considered the following student behaviours occurred at least weekly in their school

	Arriving late at school		Absenteeism		Intimidation or verbal abuse among students		Use-possession of drugs and/or alcohol	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**70**	**(4.4)**	**62**	**(4.6)**	**29**	**(4.7)**	**6**	**(2.2)**
Australia	66	(4.9)	59	(5.2)	25	(4.4)	0	(0.0)
Finland	87	(3.0)	64	(4.0)	28	(3.8)	1	(0.7)
Japan	51	(3.8)	40	(3.5)	4	(1.5)	0	(0.0)
Korea	26	(3.7)	20	(3.2)	8	(2.4)	0	(0.0)
Singapore	52	(0.3)	35	(0.3)	2	(0.0)	0	(0.0)
Flanders (Belgium)	65	(3.8)	30	(4.3)	31	(4.2)	4	(1.7)
TALIS Average	**52**	**(0.7)**	**39**	**(0.6)**	**16**	**(0.5)**	**1**	**(0.1)**

Source: OECD TALIS 2013 Database

Professional climate in schools in Alberta is very positive

A vast majority of teachers across TALIS countries work in environments with a positive professional climate among the teaching staff. Professional climate is defined in TALIS by the extent to which school staff share a common set of beliefs about schooling; the degree to which staff have open discussions about difficulties; the extent to which there is mutual respect for colleagues' ideas; and whether there is a culture of sharing success. It is important to note that answers to these questions were provided by school principals rather than by teachers.

In Alberta, 96% of participating teachers work in schools where staff share a common set of beliefs about schooling and learning. This percentage puts Alberta third among TALIS participating countries/economies behind only Japan (98%) and Singapore (97%). The TALIS average is 87%, and country scores range from 57% to 98%.

There is also a high level of co-operation between the school and local communities in Alberta—89% of the teachers work in schools where the principal reported that this statement applies to their school. Again, this puts Alberta 3rd among TALIS countries behind only Romania (99%) and Korea (91%). Interestingly, the Nordic countries (Denmark, Norway and Sweden) tend to report the lowest percentages, from 33% to 46%.

Open discussion about difficulties, mutual respect for colleagues' ideas and a culture of sharing successes are also prevalent in the schools of most of Alberta junior high school teachers (95% to 96%). Alberta is not unique in this respect—the results in the vast majority of other countries that participated in TALIS are similar.

Student-teacher relations in Alberta and all TALIS countries are viewed as very positive by both principals and teachers.

The quality of student-teacher relations was also considered as an indicator of school climate in in TALIS. On average, 98% of teachers across TALIS countries work in schools whose principals agree or strongly agree that there are good relationships between teachers and students, with no notable exceptions. The vast majority of teachers in every participating TALIS country also agree, or strongly agree, with statements about positive teacher-student relations at their schools (Table 2.13).

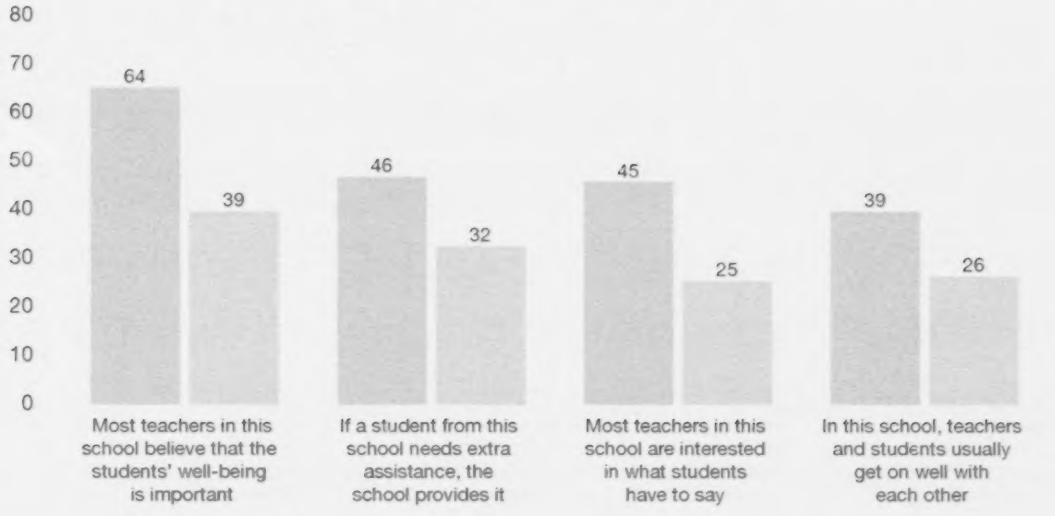
However, it is inaccurate to say that teachers in Alberta do not differ in their evaluation of student-teacher relationships in their schools from teachers in other countries that participated in TALIS. When the analysis focuses only on teachers who "strongly agreed" with each statement (Figure 2.15), it becomes apparent that teachers in Alberta are much more positive in their views than their peers in other countries.

TABLE 2.11 Percentage of teachers in lower secondary education who "agree" or "strongly agree" that the following statements apply to their school

	In this school, teachers and students usually get on well with each other		Most teachers in this school believe that the students' well-being is important		Most teachers in this school are interested in what students have to say		If a student from this school needs extra assistance, the school provides it	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**97**	**(0.4)**	**99**	**(0.2)**	**98**	**(0.4)**	**96**	**(0.7)**
Australia	97	(0.6)	98	(0.3)	95	(0.5)	94	(0.8)
Finland	97	(0.5)	98	(0.3)	95	(0.5)	97	(0.3)
Japan	95	(0.6)	94	(0.5)	94	(0.5)	94	(0.5)
Korea	94	(0.6)	91	(0.7)	92	(0.6)	77	(0.9)
Singapore	96	(0.3)	98	(0.3)	92	(0.5)	98	(0.2)
Alberta (Canada)	97	(0.4)	99	(0.2)	98	(0.4)	96	(0.7)
England (UK)	97	(0.4)	99	(0.3)	97	(0.5)	96	(0.6)
Flanders (Belgium)	97	(0.4)	98	(0.2)	95	(0.5)	98	(0.3)
TALIS Average	**95**	**(0.1)**	**96**	**(0.1)**	**92**	**(0.1)**	**91**	**(0.1)**

Source: OECD TALIS 2013 Database

FIGURE 2.15 Percentage of junior high school teachers in Alberta who "strongly agree" that the following statements apply to their school



Source: OECD TALIS 2013 Database

2.7 School Autonomy

Alberta shares very low school level autonomy on curriculum content and teacher salaries with a few countries such as Malaysia, Korea, France, France and Japan

The degree of school autonomy over tasks such as teacher hiring/firing, teacher salaries, budgets, student issues, curriculum content, etc., varies across TALIS countries. There are a few countries such as Czech Republic, Estonia, the Netherlands, the Slovak Republic and England (United Kingdom) where a large proportion of teachers work in schools where principals report a high level of autonomy across all areas. At the opposite end of the spectrum are countries like Malaysia and Mexico where very few work in schools where the principals consistently report low levels of school autonomy.

Most of the teachers in Alberta (90% to 98%) work in schools that have autonomy over the following: appointing or hiring teachers (96%); deciding on budget allocations within the school (90%); approving students for admission to the school (92%); choosing which learning materials are used (98%); and deciding which courses are offered (96%).

The areas where schools in Alberta have the least autonomy are related to establishing teacher salaries and determining salary increases (Table 2.14). At 4%, only three other TALIS countries/economies (Croatia (3%), France (1%) and Malaysia (0%)) are behind Alberta in terms of the proportion of schools where the principal has authority over establishing teacher salaries. The country percentages range from 0% to 98%, and the TALIS average is 36%. Less than half (41%) of the teachers also work in schools where the principal reported that responsibility for determining curriculum and course content was held considerably at the school level. Over half of them (62%) also teach in schools where responsibility for dismissing or suspending teachers from employment is held at the school level. A few other countries such as Malaysia, Korea, France, Japan and Flanders (Belgium) also show relatively lower levels of school autonomy on tasks related to teacher salaries and determining course content like Alberta (Table 2.14).

TABLE 2.13 Percentage of teachers in lower secondary education whose school principal reported that considerable responsibility for the following tasks is held at the school level

	Establishing teachers' starting salaries, including setting pay scales		Determining teachers' salary increases		Deciding on budget allocations within the school		Determining course content, including national/ regional curricula	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**4**	**(1.5)**	**5**	**(1.7)**	**90**	**(2.5)**	**41**	**(4.4)**
Australia	33	(4.5)	29	(3.8)	94	(3.5)	86	(3.0)
Finland	24	(3.6)	29	(4.3)	96	(1.7)	76	(3.8)
Czech Republic	98	(1.1)	97	(2.0)	100	(0.0)	100	(0.0)
France	1	(0.7)	2	(0.8)	97	(1.3)	22	(3.4)
Japan	7	(1.2)	16	(2.5)	60	(3.7)	53	(3.4)
Korea	12	(2.6)	9	(2.2)	95	(1.8)	67	(3.8)
Malaysia	0	(0.0)	11	(2.7)	40	(4.3)	11	(2.7)
Singapore	10	(0.1)	18	(0.1)	97	(0.0)	86	(0.2)
England (UK)	94	(2.0)	97	(1.3)	100	(0.0)	97	(1.6)
Flanders (Belgium)	6	(2.2)	4	(1.9)	95	(2.2)	34	(4.7)
TALIS Average	**36**	**(0.5)**	**37**	**(0.5)**	**82**	**(0.4)**	**65**	**(0.5)**

Source: OECD TALIS 2013 Database

2.8 Summary of key points

The keys points from the analysis of the profile of junior high school teachers in Alberta and the schools where they teach in comparison with other countries that participated in TALIS 2013 are as follows:

1. Like other countries the teaching profession in Alberta is female dominated.
2. Alberta teachers are relatively younger and less experienced compared to other countries.
3. More experienced teachers in Alberta are mostly employed full time with permanent contracts. Teacher attrition because of an aging teacher population does not currently appear to be a major issue in Alberta.
4. Less experienced teachers in Alberta are more likely to be on fixed-term contracts or work part time out of necessity than more experienced teachers. Less experienced teachers are also more likely to teach in schools where a significant proportion of students come from socio-economically disadvantaged homes as well in schools located in small towns.
5. Alberta teachers are highly educated compared to other countries, but Alberta is one of the very few TALIS participants where a majority of teachers do not feel that their formal education/training covered the elements of content, pedagogy and practice for all the subjects they teach.
6. The proportion of teachers who specialized in various subjects as part of their teacher training is very close to the proportion of teachers teaching those subjects. However, teachers are not always assigned to teach the subjects in which they specialized. As a result, there are some subjects where a very high proportion of teachers are teaching without having any formal training. As well, a significant proportion of teachers do not teach subjects in which they specialized.
7. Alberta teachers are more likely to teach in schools where there is a high proportion of students with special needs and students whose native language is not the language in which they are being taught. Compared to the international average, twice as many junior high school teachers in Alberta teach in schools where more than 10% of students have special needs or more than 10% of students' first language is different from the language of instruction.
8. Compared to other countries, junior high schools in Alberta are relatively smaller, but class sizes are relatively larger. Teachers in Alberta also have access to more support staff and administrative personnel in their schools.
9. Incidence of student absenteeism and lateness in Alberta schools are above the TALIS average, but overall the professional climate and student-teacher relations are quite positive.
10. Schools in Alberta have considerable autonomy in setting budgets and hiring teachers, but Alberta is among TALIS 2013 participants where schools have the least autonomy over teacher salaries and curriculum content.

CHAPTER 3

School Principals and Leadership

School Principals and Leadership

A school principal is responsible for ensuring that the academic goals of the school are well-articulated, the environment is one that is conducive to education, and teachers are focussed on instructional improvement[1]. Research supports the assertion that principal leadership has a significant and positive relationship with teacher commitment to school mission, positive school community, school partnerships, quality of instruction and student achievement.[2,3,4] It is therefore important to understand who these school leaders are, how they are prepared and develop as professionals, what work they do, what challenges they face, and how they exercise leadership.

This chapter looks at the responses from principals of schools that participated in TALIS. It reports data on the age and gender of principals, their formal preparation, their development as professionals, their experience, the tasks they perform, the way they lead, and the possible impact they can have on the schools in which they work.

3.1 Demographic profile of junior high school principals

Alberta has younger, less experienced and highly educated school principals

As shown in Figure 3.1, the typical junior high school principal in Alberta is about 49 years old and is 3 years younger than his or her peers in countries participating in TALIS 2013. Almost half (48%) of junior high school principals in Alberta are 50 years or older, which is a smaller proportion than across all TALIS countries, where 62% of principals are 50 years or older. Not surprisingly, these numbers are in sharp contrast to the proportion of teachers who are 50 years or older (21% for Alberta and 30% for all TALIS countries; see Figure 2.2).

Despite the fact that teaching as a profession continues to be dominated by females, principals tend to be male. For example, while 60% of the teachers in Alberta are female, females account only for only 43% of junior high school principals. The proportion of female principals across TALIS countries (49%) is also lower than the proportion of female teachers (68%).

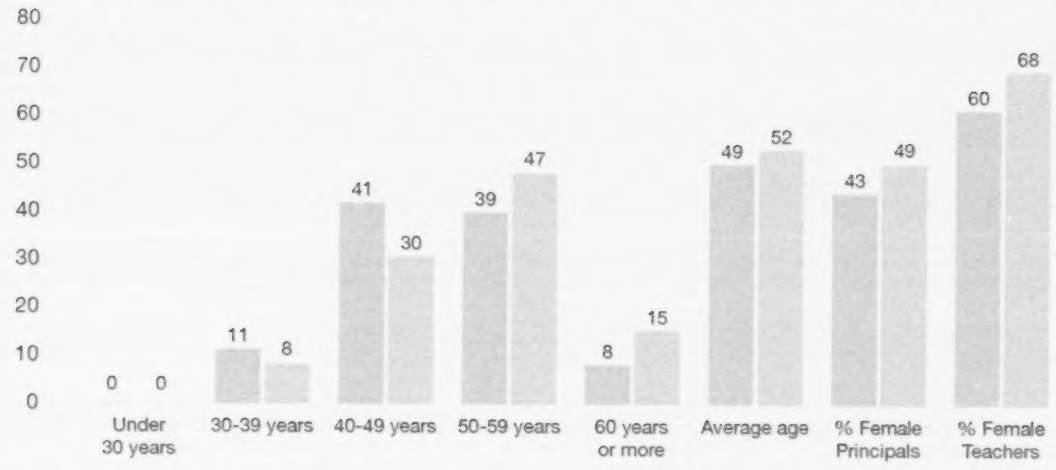
1 Wallace Foundation, 2013. *The School Principal As Leader: Guiding Schools to Better Teaching and Learning*. Retrieved from www.wallacefoundation.org/knowledge-center/school-leadership/effective-principal-leadership/Documents/The-School-Principal-as-Leader-Guiding-Schools-to-Better-Teaching-and-Learning-2nd-Ed.pdf. December 26, 2013.

2 Pont, B., D. Nusche, and H. Moorman, 2008. *Improving School Leadership, Volume 1: Policy and Practice*. Paris, France: OECD.

3 Ross, J.A., and P. Gray, 2006. School Leadership and Student Achievement: The Mediating Effects of Teacher Beliefs. *Canadian Journal of Education* 29(3), 798–822.

4 Marks, H.M., 2003. Principal Leadership and School Performance: An Integration of Transformational and Instructional Leadership. *Educational Administration Quarterly* 39, 370-397.

FIGURE 3.1 Gender and age distribution of junior high school principals in Alberta



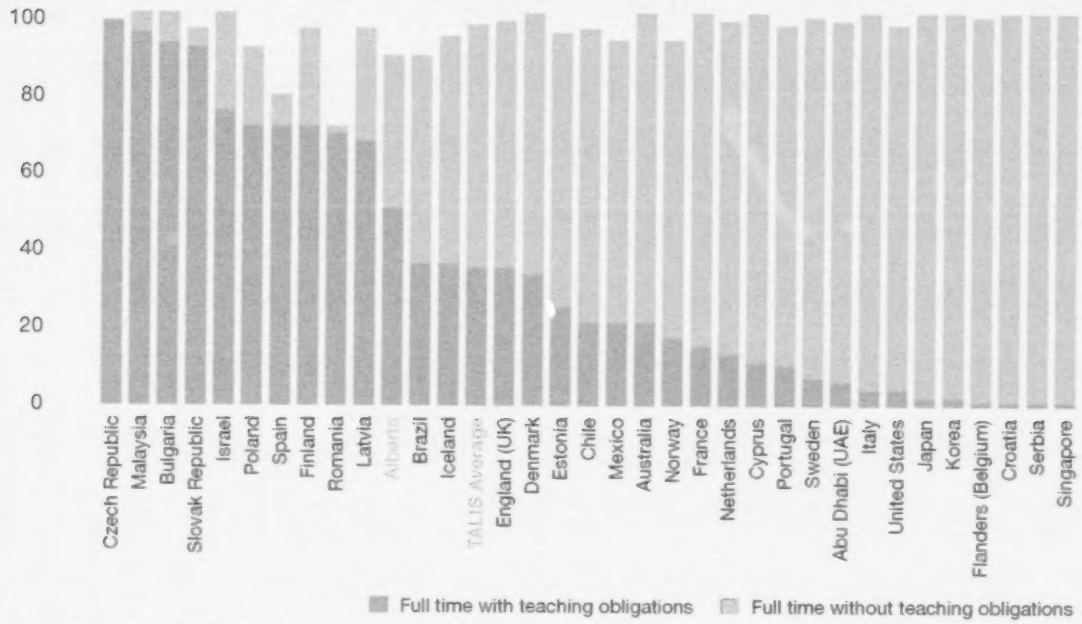
Source: OECD TALIS 2013 Database

In Alberta, 96% of junior high school principals have a bachelor's or master's degree, and 4% have doctorate degrees. While it is clear that principals with a doctorate are a small minority, it is important to note that school principals in Alberta are four times more likely to have a doctorate degree than teachers.

Since school principals are, on average, nine years older than teachers, they also have more years of teaching experience. The average junior high school teacher has 13 years of teaching experience while the average junior high school principal in Alberta has spent 8 years working as a principal and 21 years in total working as a teacher. For all TALIS countries, the average is 9 years working as a principal and 21 years as a teacher. More than half of junior high school principals in Alberta (57%) have 10 years or less of experience as a principal. The average for all TALIS countries is 46%.

Alberta has a relatively higher proportion of school principals who work full time with teaching obligations compared to other participating TALIS countries (Figure 3.2). Exactly half of junior high school principals in Alberta work full time with teaching obligations. Another 39% also work full time, but they don't have any teaching obligations. The remaining 11% work part time, with or without teaching obligations. Across all TALIS countries 35% of lower secondary school principals work full time with teaching obligations, and 62% work full time without any teaching obligations. In Singapore, Korea and Japan (high PISA performing Asian countries), almost all school principals (98% to 99%) work full time with no teaching obligations. However, in Finland (another high PISA performing country) more principals (71%) than in Alberta work full time with teaching obligations.

FIGURE 3.2 Percentage of lower secondary education principals who work full time with or without teaching obligations



Source: OECD TALIS 2013 Database

3.2 Formal leadership training

The majority of junior high school teachers in Alberta have received training in school administration and instructional leadership

The demands upon school leaders are many and diverse. They require considerable administrative acumen and knowledge of teaching and learning. TALIS 2013 inquired about the nature of the education that school leaders have received. It asked about participation in school administration or principal training programs or courses and instructional leadership training or courses. The results for Alberta and other selected TALIS countries are presented in Tables 3.1a and 3.1b.

Among all TALIS countries, the proportion of principals with no training in school administration range from 0% (Poland) to 58% (Croatia) with an average of 15%. In Alberta, 17% of junior high school principals have never received any training in school administration, and 8% have not received any training in instructional leadership. Among the top PISA performing countries (Singapore, Korea, Finland, Japan), the proportion of principals without school administration training is two to four times smaller than in Alberta. Also of note is the fact that in both Finland and Singapore, only a very small proportion of principals does not receive any formal training in school administration before becoming principals.

TABLE 3.1a Percentage of school principals who received formal training in school administration

	School administration or principal training program or course							
	Before taking up a position as principal		After taking up position as principal		Before and after taking up position as principal		Never	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**39**	**(3.8)**	**21**	**(3.5)**	**23**	**(3.3)**	**17**	**(2.4)**
Australia	23	(5.0)	24	(4.7)	17	(4.7)	36	(5.5)
Finland	70	(3.9)	8	(2.3)	18	(2.9)	3	(1.6)
Japan	14	(2.3)	45	(4.4)	37	(3.8)	4	(1.3)
Korea	37	(5.3)	16	(3.4)	43	(5.5)	4	(2.1)
Singapore	65	(3.9)	6	(2.2)	22	(3.7)	7	(2.2)
England (UK)	39	(3.6)	11	(4.4)	26	(4.4)	24	(5.7)
Flanders (Belgium)	16	(2.5)	63	(4.0)	13	(3.3)	8	(3.0)
TALIS average	**25**	**(0.6)**	**37**	**(0.8)**	**22**	**(0.6)**	**15**	**(0.5)**

Source: OECD TALIS 2013 Database

Internationally, the average proportion of principals without instructional leadership training (22%) is higher than the average proportion of those without school administration training (15%). In Alberta, the results are the opposite: among junior high school principals, 8% do not have formal training in instructional leadership and 17% do not have formal training in school administration. Alberta is also among TALIS countries/economies with the lowest number of principals who don't have any instructional leadership training. Judging by the relatively high proportion of principals in several countries without formal training in instructional leadership, it would appear that in some countries school principals are not necessarily expected to act in such a capacity.

Even though Alberta has a relatively high proportion of principals who are trained in instructional leadership, almost one quarter of them (24%) had their training after they became principals. In Singapore and Korea, which also have a high proportion of school principals with instructional leadership training, only 6% and 5%, respectively, receive that training after becoming principals. The higher proportion of principals in Alberta who receive training only after they have become principals may suggest less-than-optimal succession and career planning for that role.

TABLE 3.1b Percentage of school principals who received formal training in instructional leadership

	Instructional leadership training or course							
	Before taking up a position as principal		After taking up position as principal		Before and after taking up position as principal		Never	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**34**	**(3.4)**	**24**	**(4.1)**	**33**	**(3.9)**	**8**	**(2.1)**
Australia	20	(3.8)	27	(4.8)	22	(5.1)	31	(6.2)
Finland	14	(3.3)	30	(3.8)	28	(4.1)	28	(3.6)
Japan	51	(4.1)	23	(4.0)	20	(3.1)	6	(1.9)
Korea	50	(5.8)	5	(1.7)	38	(4.9)	7	(2.8)
Singapore	48	(4.5)	6	(2.2)	37	(4.3)	9	(2.5)
England (UK)	39	(5.9)	9	(3.4)	18	(4.7)	34	(4.9)
Flanders (Belgium)	11	(2.5)	50	(4.3)	12	(2.8)	28	(4.6)
TALIS Average	**24**	**(0.7)**	**31**	**(0.7)**	**23**	**(0.7)**	**22**	**(0.7)**

Source: OECD TALIS 2013 Database

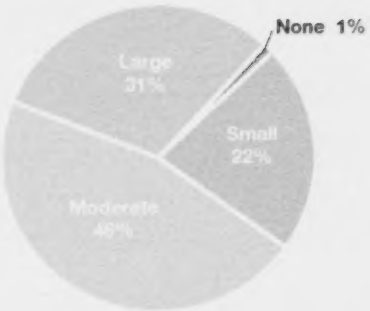
To effectively support, supervise and evaluate teachers, principals need to acquire the knowledge, skills, confidence and credibility to carry out their instructional leadership responsibilities at the beginning of their careers (The Alberta School Leadership Framework 2010).[5] They must also have continued support and guidance from their supervisors to help them deal with the challenges associated with the job.

School principals in Alberta were asked to indicate the degree of positive impact their formal education has on the confidence and competencies they need as a school leader. The majority of the responses (77%) fell in the category of moderate to large impact (Figure 3.3). However, the fact that there are almost one quarter (23%) of junior high school principals who indicate that their formal education has a small or no positive impact on the confidence and competencies they need as a school leader may be of concern.

When asked to indicate how credible they are perceived as instructional and learning leaders by the teachers in their school, 94% of Alberta junior high school principals indicated that they are perceived as "mostly" or "very credible" (Figure 3.4). They were also asked to indicate how satisfied they are with the support and guidance they receive from their supervisor. More than one third (38%) expressed their dissatisfaction with the support and guidance they are receiving and another 6% were neither satisfied nor dissatisfied (Figure 3.5).

5 http://education.alberta.ca/media/2266441/thealbertaschoolleadershipframework.pdf

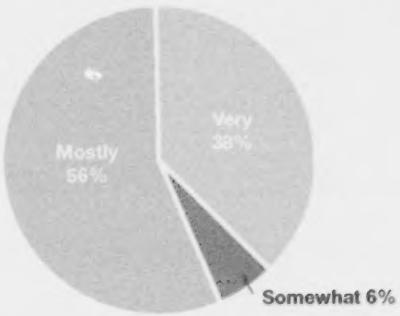
FIGURE 3.3 What positive impact did your formal education have on the confidence and competencies you need as a school leader?—Responses of Alberta junior high school principals[1]



1 This question is Alberta-specific, so there is no data for any other countries to compare with

Source: OECD TALIS 2013 Database

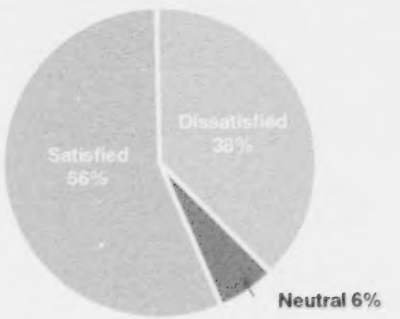
FIGURE 3.4 How credible do you think you are perceived as an instructional and learning leader by teachers in your current school?—Responses of Alberta junior high school principals[1]



1 This question is Alberta-specific, so there is no data for any other countries to compare with

Source: OECD TALIS 2013 Database

FIGURE 3.5 How satisfied are you with the support and guidance you receive from your supervisor?—Responses of Alberta junior high school principals[1]



1 This question is Alberta-specific, so there is no data for any other countries to compare with

Source: OECD TALIS 2013 Database

3.3 Leadership training index

The level of leadership training for Alberta principals is considered very strong in comparison with those of other participating TALIS countries

A leadership training index[6] was constructed from participation in the following types of training:

- school administration or principal training program or course
- teacher training/education program or course
- instructional leadership training or course

The results for Alberta and selected TALIS countries are presented in Table 3.2.

In Alberta, 80% of junior high school principals were categorized as having strong leadership training—Alberta is well above the TALIS average of 67% and is sixth among TALIS countries.

TABLE 3.2 Formal education Leadership Training Index: Percentage of principals who received leadership training in their formal education

	Leadership Training Index							
	No Leadership Training in Formal Education (0)		Weak Leadership Training in Formal Education (1)		Average Leadership Training in Formal Education (2)		Strong Leadership Training in Formal Education (3)	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**0**	**(0.0)**	**7**	**(2.2)**	**14**	**(2.4)**	**80**	**(2.6)**
Japan	2	(1.1)	3	(1.3)	3	(1.2)	92	(2.1)
Korea	2	(1.9)	2	(1.9)	5	(1.4)	91	(3.0)
Singapore	3	(1.5)	2	(1.1)	6	(2.0)	89	(2.7)
Flanders (Belgium)	2	(1.8)	4	(2.1)	25	(4.0)	70	(4.8)
Finland	0	(0.0)	3	(1.6)	27	(3.7)	70	(3.8)
Australia	0	(0.0)	27	(6.0)	18	(3.7)	56	(5.8)
England (UK)	1	(0.6)	15	(4.0)	29	(6.1)	55	(6.1)
TALIS Average	**3**	**(0.3)**	**9**	**(0.5)**	**21**	**(0.7)**	**67**	**(0.7)**

Source: OECD TALIS 2013 Database

6 Responses that indicate "never" were coded as zero (0) and responses that indicate the training had occurred "before," "after," or "before and after" were coded as one (1). Each respondent's codes were summed to produce the following categories: 0 (no training), 1 (weak leadership training), 2 (average leadership training) and 3 (strong leadership training)

3.4 Professional development for school principals

Alberta school principals have an above-average participation rate in professional development, but they spend significantly fewer days on professional development activities than their international peers

Data on principals' professional development activities in the 12 months prior to the TALIS survey (Figure 3.6 and Table 3.3) indicate that the majority of principals in Alberta junior high schools participate in professional development. However, they spend fewer days on professional development activities than the TALIS average.

Overall, 96% of junior high school principals in Alberta participate in at least one type of professional development activity in a year. This proportion is fairly similar to what can be observed in other countries.

Participation in conferences, courses or observation visits (88% of junior high school principals in Alberta reported participation) and participation in professional networks, mentoring or research activity (76% in Alberta) are the most frequent types of professional development activities for principals. While the participation rates in conferences or courses among Alberta principals are very similar to what can be seen in other TALIS countries, participation rates in networks, mentoring or research activities is much higher in Alberta (78% versus 51% TALIS average).

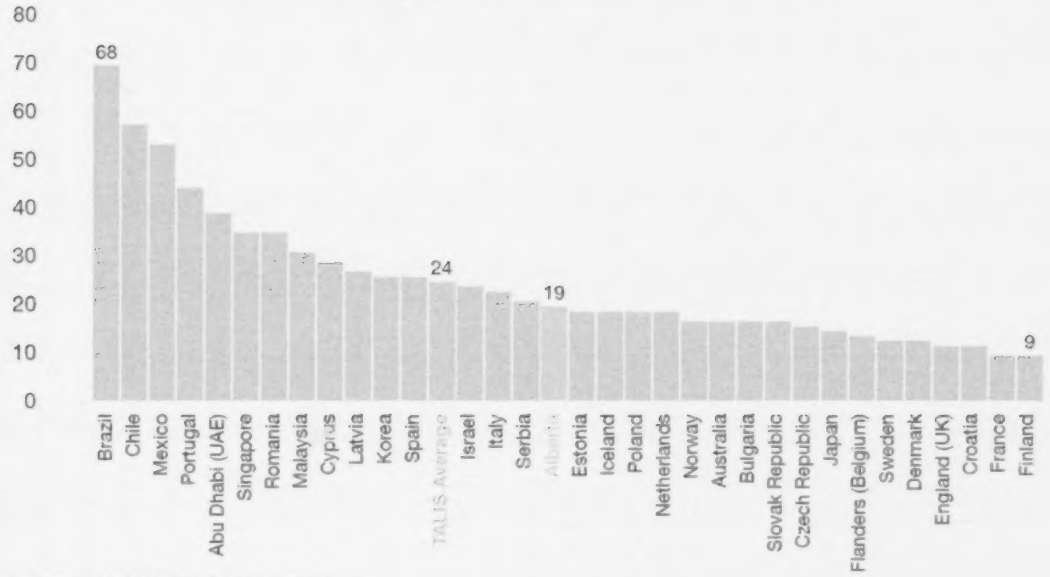
TABLE 3.3 Principals' professional development activities in the 12 months prior to the survey

	Percentage of principal who did not participate in any professional development		Percentage of principals who participated in a professional network, mentoring or research activity		Average number of days among those who participated in a professional network, mentoring or research activity		Percentage of principals who participated in courses, conferences or observation visits		Average number of days among those who participated in courses, conferences or observation visits	
	%	(S.E.)	%	(S.E.)	Average	(S.E.)	%	(S.E.)	Average	(S.E.)
Alberta	**4**	**(1.5)**	**76**	**(3.4)**	**10**	**(1.8)**	**88**	**(2.8)**	**9**	**(1.2)**
Australia	3	(3.0)	84	(3.7)	8	(0.6)	93	(3.5)	8	(0.6)
Finland	8	(2.4)	48	(4.1)	4	(0.3)	88	(2.9)	6	(0.4)
Japan	15	(3.3)	57	(4.2)	6	(0.7)	83	(3.4)	10	(0.7)
Korea	6	(2.3)	66	(5.2)	12	(1.7)	87	(3.6)	14	(2.3)
Singapore	0	(0.0)	93	(2.1)	16	(2.6)	99	(0.7)	13	(1.3)
England (UK)	3	(1.4)	79	(3.5)	6	(0.6)	94	(1.9)	5	(0.3)
Flanders (Belgium)	1	(0.9)	67	(4.5)	6	(0.6)	97	(1.3)	8	(0.5)
Average	**9**	**(0.4)**	**51**	**(0.7)**	**20**	**(2.5)**	**83**	**(0.5)**	**13**	**(0.5)**

Source: OECD TALIS 2013 Database

However, principals in Alberta spend significantly less time on their professional development. On average, a junior high school principal in Alberta spends a total of 19 days engaged in various forms of professional development activities in 12 months. The average for TALIS countries is 24 days. Principals in Brazil spend the highest number of days (68), and those in Finland (9) spend the fewest number of days on professional development (Figure 3.6).

FIGURE 3.6 Average number of days spent by school principals on professional development



Source: OECD TALIS 2013 Database

The proportions of Alberta principals who participate in different types of professional development activities are similar to those found in other participating countries—with the exception of participation in networks, mentoring or research activities. In these areas, principals in Alberta are significantly more likely to report participation, but the duration of that participation is only half of what is reported by their international peers.

Principals are less likely to participate in professional development if they don't find it relevant, or if there are no incentives or employer support

Many principals identify several barriers to participation in professional development (Table 3.4). In most cases the proportion of principals in Alberta reporting each of the barriers was higher than the TALIS average.

TABLE 3.4 Barriers to principals' participation in professional development

	Too expensive		Lack of employer support		Conflicts with work schedule		Conflicts with family responsibilities		No relevant opportunities available		No incentives	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**32**	**(3.8)**	**15**	**(3.1)**	**63**	**(3.5)**	**36**	**(3.8)**	**12**	**(2.8)**	**40**	**(3.8)**
Australia	32	(6.1)	9	(2.9)	61	(5.9)	28	(6.1)	10	(4.7)	34	(5.5)
Finland	10	(2.7)	9	(2.3)	42	(4.0)	18	(2.7)	16	(3.0)	30	(3.6)
Japan	43	(4.8)	35	(4.3)	78	(3.5)	15	(3.1)	30	(4.0)	26	(3.9)
Korea	18	(4.1)	36	(4.4)	67	(4.7)	4	(2.0)	18	(4.3)	41	(4.1)
Singapore	3	(1.5)	2	(1.2)	43	(3.9)	8	(2.4)	9	(2.4)	7	(2.3)
England (UK)	30	(4.0)	4	(1.9)	57	(5.9)	17	(2.8)	8	(2.1)	18	(2.9)
Flanders (Belgium)	21	(3.9)	8	(2.7)	43	(4.5)	9	(2.9)	1	(0.6)	11	(2.5)
TALIS average	**30**	**(0.7)**	**21**	**(0.6)**	**43**	**(0.8)**	**13**	**(0.5)**	**22**	**(0.6)**	**35**	**(0.7)**

Source: OECD TALIS 2013 Database

The data may suggest that Alberta principals place more value on work-life balance—they are much more likely than their international peers to identify conflict with work schedule (63% vs. 43% TALIS average) and family responsibilities (36% vs. 13% TALIS average) as barriers. Alberta principals also place less emphasis on incentives compared to work schedule for participating in professional development. However, it is worth noting that principals in Alberta (40%) were more likely to identify lack of incentives as barrier to professional development than principals in many other TALIS countries.

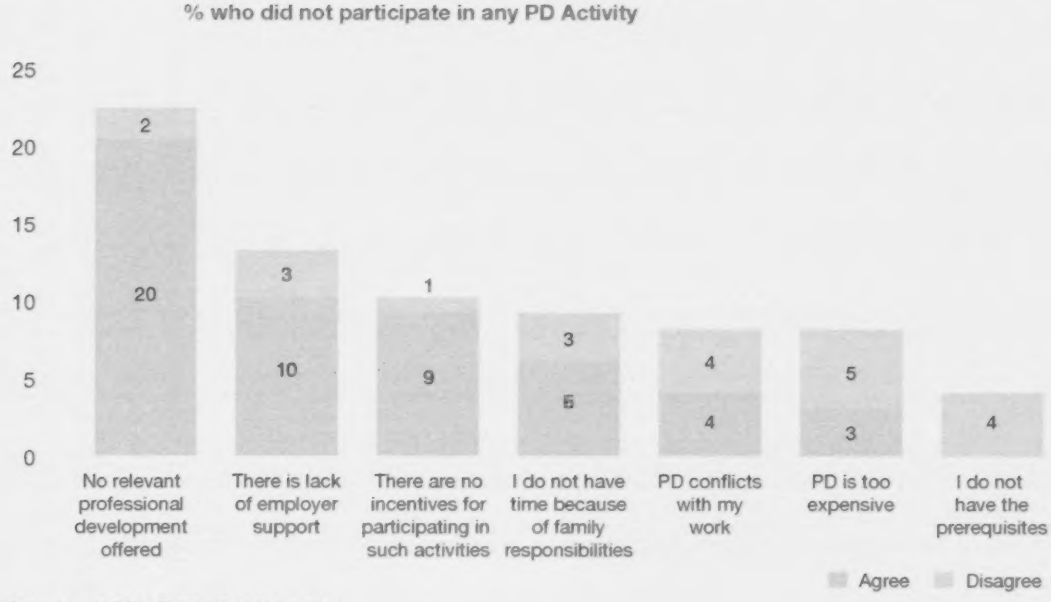
Giving the high level of participation rates in professional development by school principals in Alberta, these barriers do not seem to prevent them from participating. What is more likely is that these barriers may prevent them from taking the amount of professional development they would like to have.

To see if there are any consistent patterns, the links between the reported barriers and the degree of participation were explored. Figure 3.7 shows the non-participation rates for principals who agree with the statements about barriers to professional development compared to those who do not agree. The cost of professional development and work schedule does not seem to prevent participation while factors such as relevant opportunities, incentives, employer support and family responsibilities tend to affect participation.

Although "conflict with work schedule" is the most frequently mentioned barrier in Alberta, participation rates differ little between those who agree and those who do not agree that conflicts with work schedule pose a barrier to their participation in professional development. However, "no incentives," the second most frequently mentioned barrier, appears to matter for participation rates. Principals who agree that there are no incentives for participating in professional development are nine times less likely to participate in any professional development activity than those who did not agree.

"Conflict with family responsibilities" is the next most identified barrier. It also appears to make a difference in participation rates. The fourth most frequently mentioned barrier—"PD is too expensive"—does not appear to factor into participation. The least frequently mentioned barriers, "lack of employer support" and "no relevant professional development offered," both show differences in participation rates. Lack of relevant professional development offered showed the most difference in participation rates: 20% of principals who agree that there is a lack of relevant professional development did not participate in any professional development activity in the 12-month period of reference compared to only 2% of principals who do not agree. This result also means that 80% of principals who may not have found relevant development opportunities still participated in some professional development. These findings show a strong commitment to professional development by principals in Alberta even when the opportunities do not fully match their needs.

FIGURE 3.7 Non-participation rates in professional development for principals who agreed to the following statements compared to those who did not agree



Source: OECD TALIS 2013 Database

3.5 Principal Working Time

Alberta principals devote a greater proportion of their time to interact with students than their peers in other TALIS countries

In contrast to the teacher questionnaire, principals were not asked about the number of hours they spend working, but were instead asked about the distribution of their working time spent on a variety of tasks. Table 3.5 shows the proportions of principals' time spent on various activities in Alberta in comparison with selected TALIS countries.

The proportion of time that principals in Alberta devote to a variety of tasks on their job is similar to what is reported by their international peers. On average a principal at junior high school in Alberta spends 39% of her or his time on administrative and leadership tasks and meetings. This percentage is close to the TALIS average of 41%. The remainder of a principal's time is split between curriculum and teaching-related tasks (23% compared to the TALIS average of 21%); student interactions (21%); and parent interactions (12% compared to the TALIS average of 11%).

Principals in Alberta spend a greater proportion of their time interacting with their students than do their peers. In fact, the proportion of principals' time spent on student interaction in Alberta is the highest among all TALIS countries.

Interactions with local and regional communities, business and industry is given the least amount of time by school principals in almost all countries. Alberta principals spend less than average time on this activity (4% vs. TALIS average of 7%). As discussed earlier, Alberta has a greater proportion of principals educated as educational leaders than other countries. Since this is the second most time-consuming task in all countries, it would appear that Alberta principals are better prepared for one of the key tasks they perform.

TABLE 3.5 Principals' working time: proportion of time principals report spending on the following activities

	Administrative and leadership tasks and meetings		Curriculum and teaching-related tasks and meetings		Student interactions		Parents or guardian interactions		Interactions with local and regional communities, business and industry	
	%	(S.E.)	%	(S.E.)	Average	(S.E.)	%	(S.E.)	Average	(S.E.)
Alberta	**39**	**(1.2)**	**23**	**(1.0)**	**21**	**(0.9)**	**12**	**(0.5)**	**4**	**(0.3)**
Australia	47	(2.3)	17	(1.5)	14	(0.8)	12	(0.8)	7	(0.4)
Finland	48	(1.3)	18	(0.8)	14	(0.6)	10	(0.5)	5	(0.3)
Japan	36	(1.0)	25	(0.7)	15	(0.5)	11	(0.4)	8	(0.4)
Korea	35	(1.3)	27	(1.0)	14	(0.6)	11	(0.4)	8	(0.5)
Singapore	44	(1.4)	22	(0.7)	16	(0.6)	10	(0.4)	6	(0.3)
England (UK)	43	(1.2)	21	(0.7)	16	(0.7)	10	(0.5)	6	(0.5)
Flanders (Belgium)	45	(1.4)	18	(0.9)	15	(0.8)	11	(0.7)	5	(0.3)
TALIS average	**41**	**(0.2)**	**21**	**(0.2)**	**15**	**(0.1)**	**11**	**(0.1)**	**7**	**(0.1)**

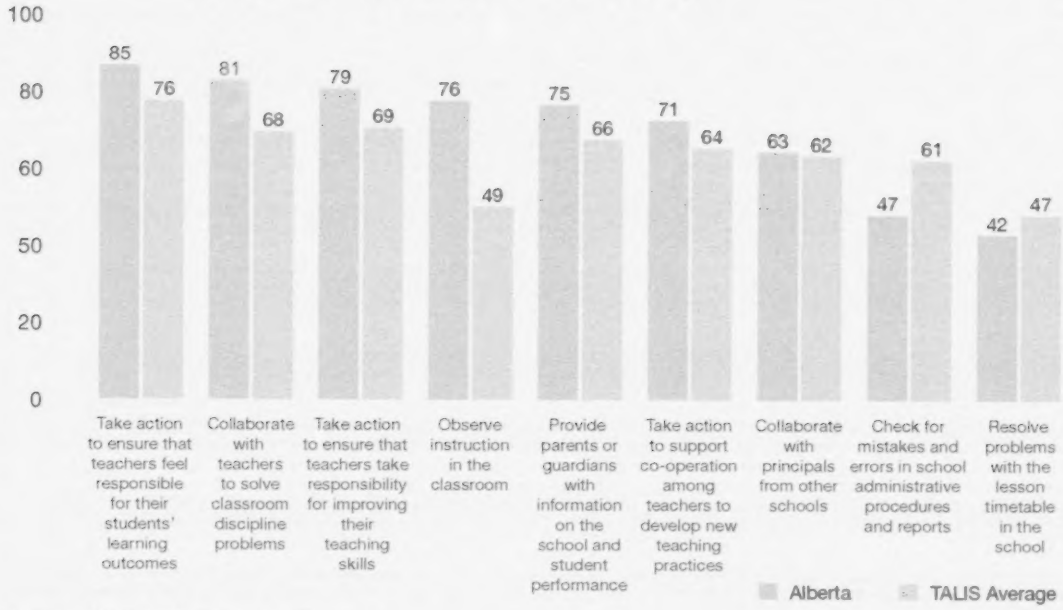
Source: OECD TALIS 2013 Database

3.6 Leadership activities of junior high school principals

Alberta principals focus more on activities related to instructional leadership and pay less attention to "administrative trivia" than their international colleagues

Figure 3.8 shows the percentages of principals who engaged "often" or "very often" in various leadership activities during the 12 months prior to the survey.

FIGURE 3.8 Percentage of junior high school principals in Alberta who engaged "often" or "very often" in various leadership activities during the 12 months prior to the survey.



Source: OECD TALIS 2013 Database

The three leadership activities in which principals in Alberta are the most likely to engage frequently are ensuring that teachers take responsibility for student learning outcomes; classroom discipline; and improving teaching skills/practices. On all three dimensions, the proportion of principals in Alberta reporting frequent or very frequent engagement in these tasks is higher than the TALIS average:

- 85% of junior high school principals in Alberta often take action to ensure that teachers feel responsible for their students' learning outcomes. This percentage is well above the TALIS average of 76%.
- 81% of principals collaborate with teachers to solve classroom discipline problems often or very often, which is also well above the TALIS average of 68%.
- 79% of principals in Alberta frequently take action to ensure that teachers take responsibility for improving their teaching skills.

It is worth noting that principals in Alberta are significantly more likely to observe instruction in the classroom than their international peers: 76% of principals in Alberta report that they engage in this activity frequently or very frequently compared to 49% average for all TALIS countries.

The leadership tasks that receive the least attention include checking for errors in administrative procedures and reports (47%), and resolving timetable issues (42%). The TALIS averages for these activities are 61% and 47% respectively. The results suggest that principals in Alberta have a stronger focus than their international colleagues on activities related to instructional leadership than on "administrative trivia," such as correcting errors in administrative reports or correcting timetables.

Principals in Alberta are more likely to share leadership responsibilities than their colleagues in other TALIS countries

In the school context, leadership is not the property of any single educator. It grows out of the shared vision, beliefs and efforts of a committed group of teachers who have a sense of belonging, who value members of their school community and who have a deep commitment to collective action for whole-school success.[7]

Shared leadership is the practice of governing a school by expanding the number of people involved in making important decisions related to the school's organization, operation and academics. In general, shared leadership entails the creation of leadership roles or decision-making opportunities for teachers, staff members, students, parents and community members. Shared leadership is widely seen as an alternative to more traditional forms of school governance in which the principal, or the administrative team, exercises executive authority and makes most governance decisions without necessarily soliciting advice, feedback or participation from others in the school or the community. The increased responsibility and accountability demanded of school principals suggests that to meet their responsibilities principals would be prudent to share their work among others inside and outside the school.[8]

Table 3.6 shows which tasks principals are responsible for and how those responsibilities are shared by others at the school level in Alberta junior high schools. The tasks that most principals have significant responsibility for include appointing or hiring teachers (92%), establishing student disciplinary policies and procedures (86%), deciding which courses are offered (85%), approving students for admission to the school (84%) and deciding on budget allocations within the school (80%).

7 Crowther, F., L. Hann, & D. Andrews, 2002. Rethinking the Role of the School Principal: Successful School Improvement in the Post-industrial Era. The Practicing Administrator. Australia.

8 Schleicher, A., ed., 2012. Preparing Teachers and Developing School Leaders for the 21st Century: Lessons from around the World. OECD Publishing. Paris: dx.doi.org/10.1787/9789264174559-en

TABLE 3.6 Percentage of principals and others at the school level who have significant responsibility for the following tasks in Alberta

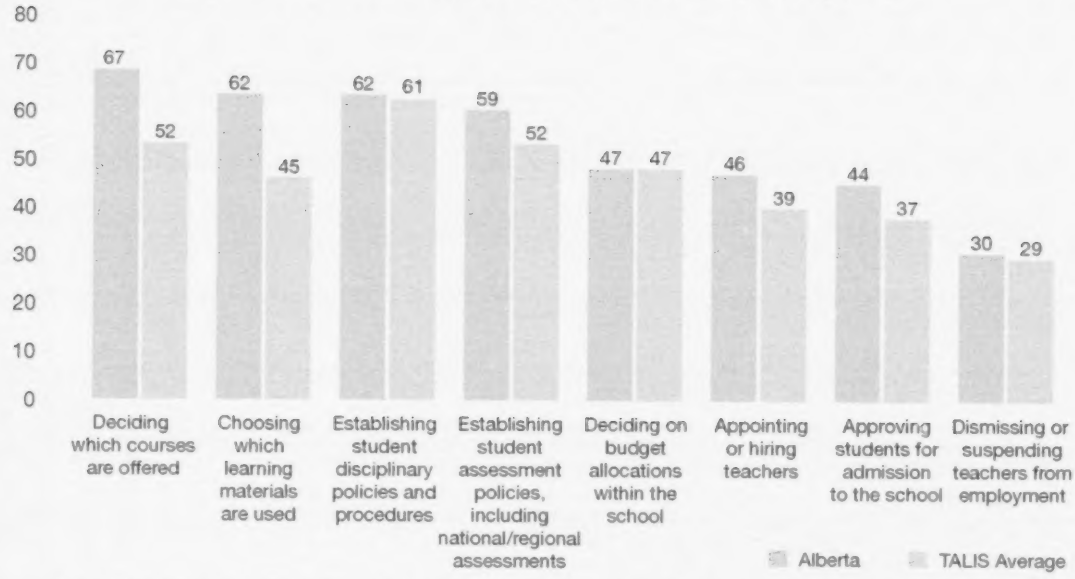
	Significant responsibility is held by							
	Principal		Sch. mgt. team		Teachers		Sch. council	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Appointing or hiring teachers	92	(2.5)	27	(3.6)	4	(1.2)	3	(1.3)
Establishing student disciplinary policies and procedures	86	(2.9)	51	(3.7)	36	(3.4)	15	(2.8)
Deciding which courses are offered	85	(2.8)	49	(3.6)	44	(3.8)	13	(2.5)
Approving students for admission to the school	84	(3.0)	24	(3.5)	2	(0.8)	2	(1.1)
Deciding on budget allocations within the school	80	(3.0)	37	(3.5)	14	(2.8)	5	(1.8)
Choosing which learning materials are used	73	(3.9)	50	(3.5)	66	(3.9)	5	(1.8)
Establishing student assessment policies, including national/regional assessments	69	(3.5)	39	(3.5)	37	(3.7)	7	(2.1)
Dismissing or suspending teachers from employment	52	(3.9)	8	(2.9)	0	(0.0)	1	(0.7)
Determining course content, including national/regional curricula	35	(3.8)	19	(3.0)	32	(4.1)	2	(1.1)
Establishing teachers' starting salaries, including setting pay scales	1	(0.7)	5	(1.8)	0	(0.0)	1	(0.7)
Determining teachers' salary increases	0	(0.4)	5	(1.8)	2	(1.1)	1	(1.0)

Source: OECD TALIS 2013 Database

Although 92% of principals are responsible for hiring teachers, almost none of them (1%) have responsibility for decisions pertaining to teachers' salaries, including establishing starting salaries, setting pay scales and determining teachers' salary increases. Since most principals don't have authority over these tasks, it is nearly impossible for them to share leadership in these areas. Determining course content, including national/regional curricula, is another area where schools don't have sufficient autonomy to be able to share leadership responsibilities.

Figure 3.9 shows the percentages of principals who report sharing responsibility for various tasks compared to averages for all principals participating in TALIS. It includes only the tasks for which the majority of principals have significant responsibility. In almost all of them, a greater proportion of Alberta principals share responsibility with other individuals or groups than the TALIS average. The tasks shared by the majority of principals in Alberta include deciding which courses are offered (67%); choosing which learning materials are used (62%); establishing student disciplinary policies (62%); and establishing student assessment policies (59%). Dismissing or suspending teachers from employment (30%), by its very nature, does not lend itself very well for sharing with teachers.

FIGURE 3.9 Percentage of principals in lower secondary education who report a shared responsibility[1] for the following tasks



1 A shared responsibility occurs when an active role is played in decision-making by the principal and one of the following entities: "other members of the school management team," "teachers (not as part of the school management team)," "school governing board," "local, municipality/regional, state, or national/federal authority."

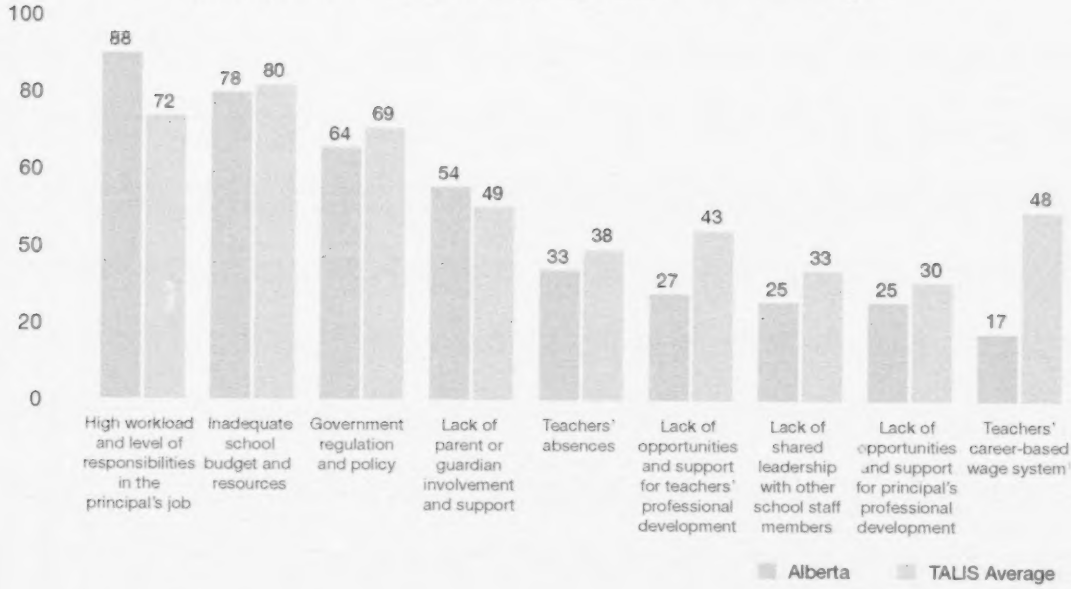
Source: OECD TALIS 2013 Database

Alberta principals believe that high workload and the level of their job responsibilities limit their effectiveness on the job

Principals were asked to indicate the extent to which certain factors limit their effectiveness as a principal. The results for Alberta and the averages for TALIS countries are shown in Figure 3.10. The majority of junior high school principals in Alberta (54% to 88%) report that factors such as a high workload and level of responsibilities in the principal's job, inadequate resources, government regulation and policy, and lack of parental support limit their effectiveness as a school principal "to some extent" or "a lot."

In most of the factors, Alberta principals are less likely to indicate that these factors limit their effectives compared to the TALIS average. A high workload and level of job responsibilities (88% for Alberta and 72% TALIS average) is the only factor that limits the effectiveness of a significantly higher proportion of Alberta principals than the TALIS average. Unfortunately, TALIS did not collect data on principals' working hours, and it is impossible to assess whether this difference between principals in Alberta and their international peers reflects difference in the amount of time they need to devote to their jobs.

FIGURE 3.10 Percentage of junior high school principals in Alberta who report that the following limit "to some extent" or "a lot" their effectiveness as principal in the school compared to the TALIS averages



1 A career-based wage system is used when an employee's salary is determined mainly by his or her educational level and age or seniority rather than by his or her performance on the job.

Source: OECD TALIS 2013 Database

3.7 Job Satisfaction

Alberta principals are equally satisfied with their jobs as their TALIS counterparts

Two aspects related to principals' job satisfaction were measured in TALIS: their satisfaction with their current work environment, and their satisfaction with their profession as school principals.

The first construct (satisfaction with current work environment) was based on responses to the following items:

- I enjoy working at this school
- I would recommend my school as a good place to work
- I am satisfied with my performance in this school
- All in all, I am satisfied with my job

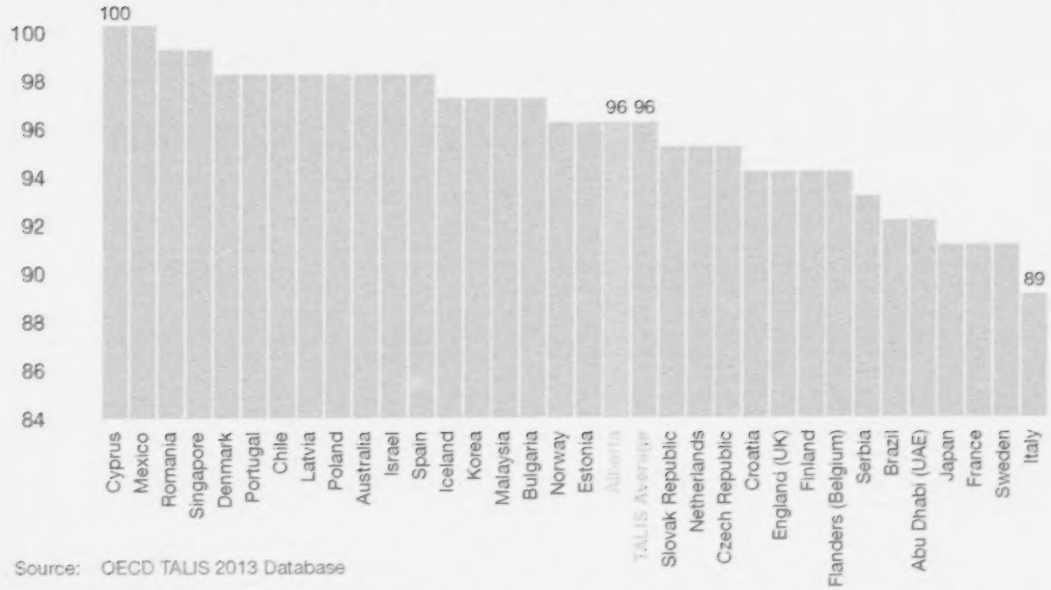
The second construct (satisfaction with the profession) was based on responses to the following items:

- The advantages of this profession clearly outweigh the disadvantages
- If I could decide again, I would still choose this job/position
- I regret that I decided to become a principal

Principals were asked to indicate how strongly they agreed or disagreed with these statements as applied to their job. The options for response raged from strongly disagree to strongly agree.

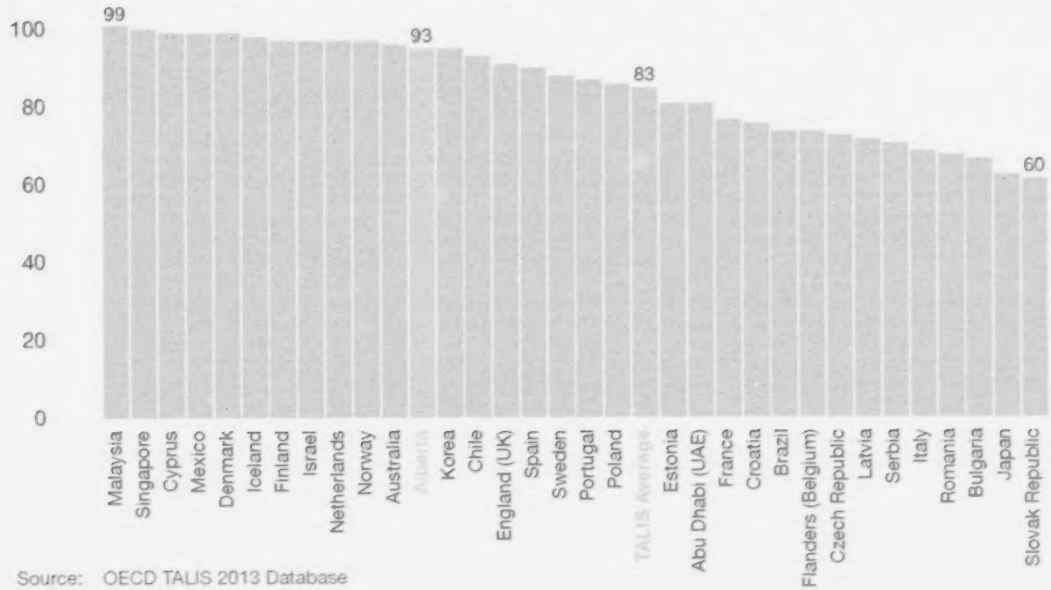
The results show that, overall, satisfaction with the current job and satisfaction with the profession are high; satisfaction rates with the current job seem higher than satisfaction with the profession, and satisfaction among principals in Alberta is similar to that of their international peers. (Figures 3.11, 3.12 and 3.13). The proportion of principals in Alberta who agree or strongly agree that they are satisfied with their job (96%) is very high but the same as the TALIS average. However, more principals in Alberta (93%) than the TALIS average (83%) agree that the advantages of their profession clearly outweigh the disadvantages. An oddity that is worth mentioning is that Alberta has a proportion of principals who agree that the advantages of being a principal clearly outweigh the disadvantages but would not chose this profession again (Figure 3.13).

FIGURE 3.11 Percentage of lower secondary principals who "agree" or "strongly agree" that, all in all, they are satisfied with their job



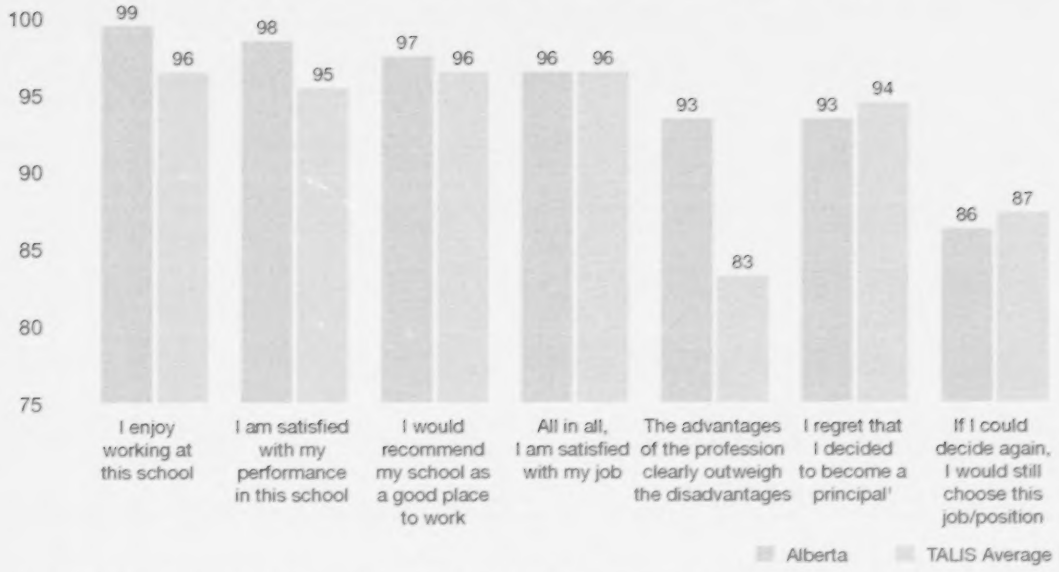
Source: OECD TALIS 2013 Database

FIGURE 3.12 Percentage of lower secondary principals who "agree" or "strongly agree" that the advantages of the profession clearly outweigh the disadvantages



Source: OECD TALIS 2013 Database

FIGURE 3.13 Principal job satisfaction: Percentage of junior high school principals in Alberta who "agree" or "strongly agree" with the following statements compared to the TALIS averages



1 For the item "I regret that I decided to become a principal," the percentage represents the principals who answered "strongly disagree" or "disagree" because of the nature of the question.

Source: OECD TALIS 2013 Database

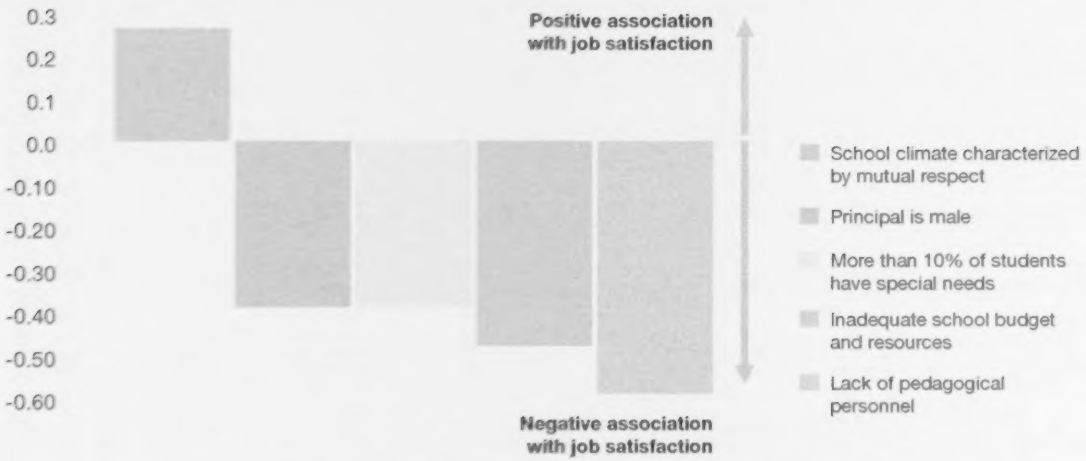
Principals report higher job satisfaction when the climate in their school is characterized by mutual respect

TALIS conducted multiple regression analysis to determine the factors that are associated with principals' job satisfaction. The index for principal job satisfaction was constructed from two underlying constructs; satisfaction with current work environment and satisfaction with the profession. The results of the regression analysis on job satisfaction for Alberta are presented in Figure 3.14.

According to the results, male principals generally report lower levels of job satisfaction than their female counterparts. Similarly, principals working in schools in which the school climate is characterized by mutual respect show higher levels of job satisfaction.

On the other hand, factors such as lack of personnel and the higher percentage of students with specials needs tend to have a negative impact on principal job satisfaction.

FIGURE 3.14 Results of multiple regression analysis on factors affecting principals' job satisfaction



These are variables where a significant relationship was found. Significance was tested at the 5% level, controlling for principal age and educational attainment.

Source: OECD TALIS 2013 Database

3.8 Summary

From the responses to the TALIS survey provided by school principals, we can determine that a typical junior high school principal in Alberta is likely male, slightly younger than their colleagues in other countries, works full time and has some teaching obligations. Principals in Alberta are highly educated, and most of them have received training in both school administration and instructional leadership. They also believe that the training they received has given them the confidence and competencies they need as school leaders.

Even though Alberta school principals have an above-average participation rate in professional development, they spend significantly fewer days on professional development activities than the average for all TALIS countries. The majority of Alberta principals identify conflict with work schedule as a barrier to participation in professional development. Principals are less likely to participate in professional development if they don't find it relevant, or if there are no incentives or employer support.

Junior high school principals in Alberta spend the majority of their time on administrative and leadership tasks, as well as on other tasks related to curriculum, teaching and student interactions. Some of the leadership tasks are shared with school management teams, teachers and, to a lesser extent, school councils. Alberta principals devote a greater proportion of their time to interaction with students than their peers in other TALIS countries. They have a stronger focus on activities related to instructional leadership than their international colleagues and pay less attention to "administrative trivia," such as correcting errors in administrative reports, or correcting timetables.

Alberta school principals are generally satisfied with their job and believe that the advantages of the profession clearly outweigh the disadvantages. However, the majority believe that high workload and the level of their job responsibilities limit their effectiveness as school principals. Factors such as a lack of personnel and the higher percentage of students with special needs tend to have a negative impact on principal job satisfaction, while a school climate that is characterized by mutual respect enhances job satisfaction.

CHAPTER 4

The Professional Development of Teachers

The Professional Development of Teachers

TALIS adopts a very broad definition of professional development among teachers:

"Professional development is defined as activities that aim to develop an individual's skills, knowledge, expertise and other characteristics as a teacher."[1]

The TALIS definition recognizes that professional development can be provided in many ways, ranging from the most formal to more informal approaches. Professional development can be made available through external expertise in the form of courses, workshops or formal qualification programs. It can also be provided through collaboration between schools or between teachers from different schools (observational visits to other schools), or within the schools in which teachers work. Within-school professional development can be provided through coaching/mentoring, collaborative planning and teaching, and the sharing of good practices.

To assess teachers' involvement in professional development activities, teachers were asked to indicate whether or not they had participated in any of the following activities during the 12 months prior to the survey:

- courses or workshops (e.g., on subject matter or methods and/or other education-related topics)
- education conferences or seminars (where teachers and/or researchers present their research results and discuss education problems)
- observation visits to other schools
- observation visits to business premises, public organizations and non-governmental organizations
- in-service training courses in business premises, public organizations or non-governmental organizations
- qualification program (e.g., a degree program)
- participation in a network of teachers formed specifically for the professional development of teachers
- individual or collaborative research on a topic of professional interest
- mentoring and/or peer observation and coaching, as part of a formal school arrangement

In addition to asking teachers about their professional development activities during the 12 months prior to the survey, TALIS also asked teachers about the support they received and the impact that professional development had on their practice. The survey also asked teachers about the areas of their work that was most in need of further development and the barriers to participation in professional development.

1 OECD, 2009. Creating Effective Teaching and Learning Environments: First Results from TALIS, OECD Publishing.

As well, teachers were asked about their participation in induction and mentoring activities. School principals were asked about the availability of induction and mentoring programs in their school.

Chapter 4 begins by looking at how many teachers are involved in induction and mentoring and what variables may explain their level of participation in such activities. This section is followed by a discussion of teachers' professional development needs, their types and levels of participation, and the main barriers to their participation in professional development.

4.1 Access to induction programs and participation rates

Most junior high school principals in Alberta report that there are induction programs in their schools, but only about half of the teachers say they participated in an induction program during the beginning years of their teaching

A Teacher Induction Program involves practices used to help teachers who are new to the school as well as beginning teachers (new to the profession) become competent and effective professionals in the classroom. Induction programs also help develop an understanding of the local school, community and cultures. TALIS defines an induction program[2] as a range of structured activities at a school that support new teachers' introduction into the teaching profession and into a school. These activities include mentoring by experienced teachers and exclude activities focusing on student teachers who are still within a teacher education program.

TALIS 2013, through two channels, sought to learn the extent to which formal programs for induction and mentoring of new teachers exist in lower secondary schools. To assess the supply of induction and mentoring programs, school principals were asked whether induction and mentoring programs are available for teachers new to the school or new to teaching. At the same time, to assess demand for induction, teachers were asked about their participation in induction programs in their first regular employment as a teacher, as well as their current participation in mentoring activities (either by giving or receiving it).

Table 4.1 shows the level of access to formal induction programs reported by principals in Alberta and selected TALIS countries. Overall, induction programs are widely available in schools in Alberta. According to school principals, 85% of teachers work in schools in which there are induction programs. A typical approach is to offer induction programs to all teachers who are new to the school. However, there is also a significant proportion of schools in which induction programs are only offered to teachers who are new to teaching. Principals of 51% of Alberta junior high school teachers indicate that there are induction programs for all teachers who are new to a school. For 34% of the teachers, their principal indicated that induction programs are available only for teachers who are new to teaching. As well, 15% of teachers teach in schools where the principal indicated that there are no formal induction programs for new teachers.

2 For the purposes of TALIS, induction activities refer to activities completed during the teacher's first regular employment. Teachers were also asked about their participation in informal induction activities that are not part of an induction program and about their participation in general and/or administrative introduction to the school, but these were not included in the analyses in this report.

The availability of induction programs across TALIS countries is more limited—44% of the teachers teach in schools that have formal induction programs for all teachers new to the school and another 22% of teachers teach in schools where there are induction programs only for teachers who are new to teaching. The remaining 34% of all teachers from TALIS countries teach in schools where there are no formal induction programs for new teachers. This rate is twice as high as it is in Alberta, which indicates that Alberta is well above the TALIS average when it comes to availability of induction programs for beginning teachers.

However, other countries such as Singapore, England, Belgium and Australia have induction programs that are universally available. Also, over 90% of the teachers teach in schools that have formal induction programs for all teachers who are new to school. Similar to Alberta, in these countries induction programs are typically offered to all teachers who are new to the school (i.e., not limited to teachers who are new to teaching).

Interestingly, almost half of teachers in Finland work in schools in which induction programs are not available to teachers.

TABLE 4.1 Access to formal induction programs reported by principals and participation in induction programs reported by teachers in Alberta and selected TALIS countries

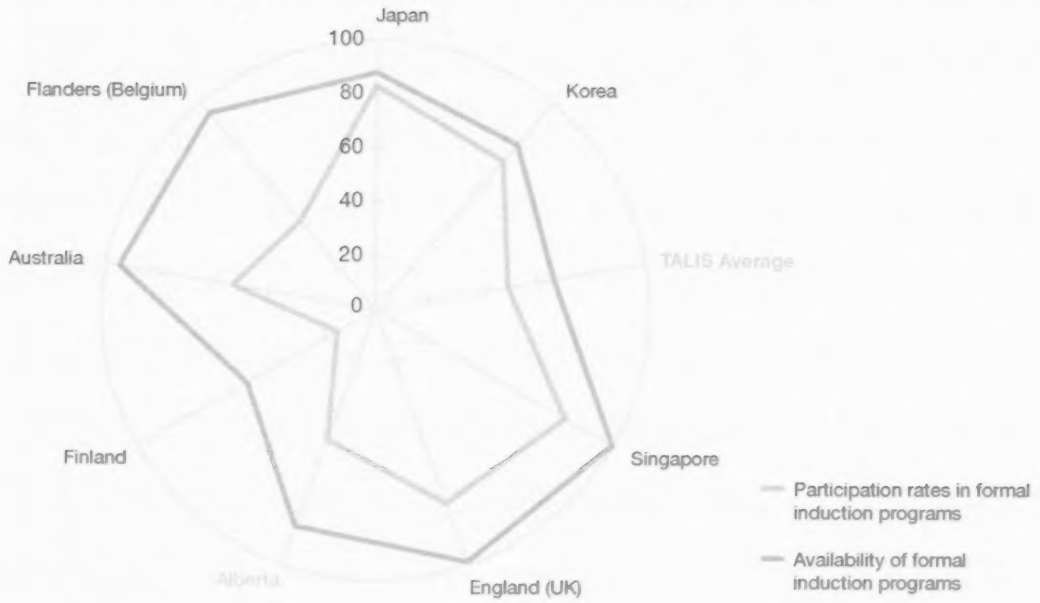
	Availability of induction programs reported by principals						Participation in induction programs reported by teachers	
	For all new teachers to the school		Only for teachers new to teaching		No induction program for new teachers		Took part in an induction program	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**51**	**(4.7)**	**34**	**(4.0)**	**15**	**(3.1)**	**51**	**(1.7)**
Singapore	99	(0.0)	1	(0.0)	0	(0.0)	80	(0.8)
England (UK)	94	(2.0)	5	(1.9)	1	(0.6)	76	(0.9)
Flanders (Belgium)	93	(2.0)	2	(1.1)	5	(1.7)	43	(1.0)
Australia	91	(2.6)	4	(1.9)	5	(1.6)	53	(1.6)
Korea	58	(3.8)	22	(3.2)	20	(3.3)	72	(0.8)
Finland	53	(4.6)	1	(1.0)	46	(4.4)	16	(1.1)
Japan	17	(2.6)	71	(2.8)	12	(2.2)	83	(0.8)
TALIS Average	**44**	**(0.6)**	**22**	**(0.5)**	**34**	**(0.6)**	**49**	**(0.2)**

Source: OECD TALIS 2013 Database

Figure 4.1 compares the availability of induction programs in schools reported by principals with the proportion of teachers who participate in induction programs for selected TALIS countries. The chart shows that participation rates in induction programs among teachers in Alberta are similar to the participation rates in TALIS countries on average, while the availability of induction programs in Alberta is significantly better. In short, Alberta seems to have an advantage when it comes to the availability of induction programs, but the participation rate is rather average. Alberta is among the countries that have a large gap between the availability of and participation in induction programs. Even though 85% of teachers teach in schools where there are induction programs for teachers who are new to the school or new to teaching, only 51% of the teachers have participated in induction programs. The difference is much greater than the TALIS average of 66% availability and 49% participation.

However, other countries, such as Finland, Australia and Belgium, have even larger gaps between access and participation than Alberta. The reasons for the gaps in these countries, including Alberta, are worth exploring. Perhaps, it could be the low engagement of teachers in these activities in spite of their availability. Or it could be because of the fact that teachers were asked about their participation in induction programs during their first employment (which, by default, occurred in the more-or-less remote past), whereas principals reported on the current availability. If the latter is true, one would expect differences in the participation rates based on years of teaching. There is also the possibility that principals over report or teachers underreport, or both.

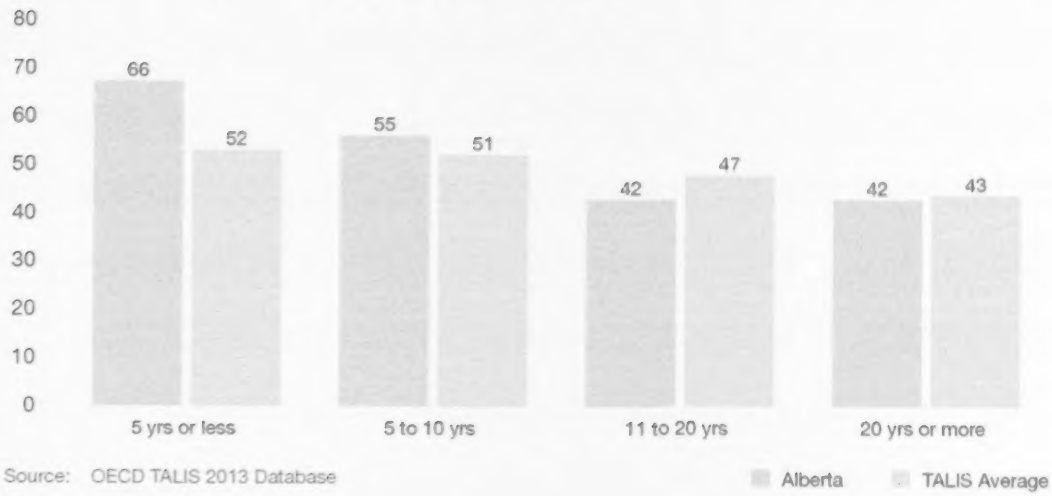
FIGURE 4.1 Comparison of access to inductions programs and teachers' participation in induction programs for selected TALIS countries (countries are organized based on the size of the gap between availability and participation in induction programs)



Source: OECD TALIS 2013 Database

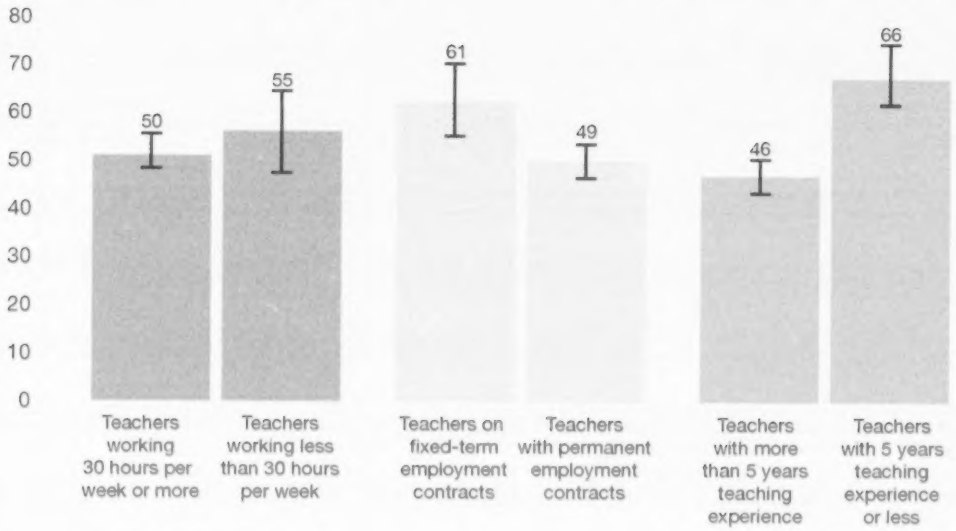
Figures 4.2 and 4.3 seek to explain some of the gaps in availability and participation rates by looking at factors such as work experience, employment status and hours of work per week. In this report, we chose work experience to see if the availability of induction programs has increased or decreased over time. Employment status and hours of work were chosen to see if teachers who consider themselves well-established in their jobs do not feel as much of a need for induction programs.

FIGURE 4.2 Alberta teachers' participation rates in induction programs by years of teaching experience



Source: OECD TALIS 2013 Database

FIGURE 4.3 Participation rates of teachers in Alberta junior high schools in induction programs by hours of work, employment contract and years of experience



Source: OECD TALIS 2013 Database

The results presented in Figure 4.2 show a steady decline in participation rates by years of teaching experience. Teachers with five years or less of teaching experience report 66% participation rate in induction programs compared to only 42% for teachers who have taught for more than 10 years. This result supports the hypothesis that induction programs may have been less available in previous decades than they are more recently.

The participation rate for Alberta teachers on fixed-term contracts is also significantly higher than those on permanent contracts (Figure 4.3). Teachers who are on fixed-term contracts may have additional motivation to be involved in induction programs in their quest to obtain permanent contracts or full-time jobs. Teachers who work less than 30 hours a week participate more in induction programs than those who work 30 hours a week or more, but the difference is not statistically significant.

4.2 Access to mentoring programs and participation rates

Mentoring programs are available in the majority of schools in Alberta, but only about a third of teachers participate in them

TALIS defines mentoring as a support structure at schools where more experienced teachers support less experienced teachers. This structure might be accessible to all teachers in the school or only to certain categories of teachers: those who are beginning teachers or those who are new to the school. A mentor serves as a guide, a supporter, a friend, an advocate and a role model.[3] Mentors can be used in induction programs for new teachers or as an aspect of professional development for all teachers. Table 4.2 shows the availability of mentorship programs and the intended target groups for selected TALIS countries.

The majority (87%) of junior high school teachers in Alberta teach in schools where mentoring programs are available. However, mentoring programs tend to target specific groups of teachers rather than being available to all teachers in a school. Only 33% of teachers in Alberta teach in schools where mentoring programs are available for all teachers, while 27% teach in schools where mentoring programs are available only for teachers who are new to teaching. Another 27% of teachers teach in schools where mentoring programs are available only for teachers who are new to the school.

This targeting of mentoring opportunities is also visible across other countries that participated in TALIS. In some cases, like Belgium/Flanders, mentoring programs are almost exclusively available to teachers who are new to the school.

It is also worth noting that, similar to what was reported with respect to availability of induction programs, Alberta stands out as one of the jurisdictions in which mentoring opportunities are available to a larger proportion of teachers than what can be seen on average among TALIS countries.

Finally, it is also interesting to observe the situation in Finland where two thirds of teachers have no access to any mentoring opportunities. This proportion is five times higher than in Alberta.

3 Eckerman Pitton, Debra, 2006. Mentoring novice teachers: fostering a dialogue process. Coven Press, Thousand Oaks, California.

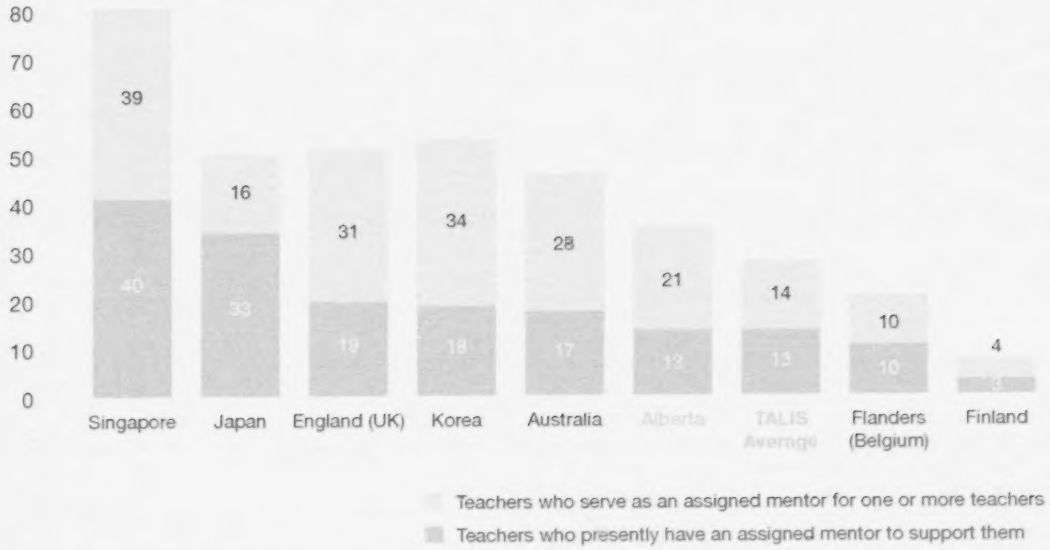
TABLE 4.2 Availability of mentorship programs for teachers: percentage of teachers whose principals indicated that there are mentorship programs in their school for the following categories of teachers in Alberta and selected TALIS countries

	Target group of mentoring system							
	Only for teachers who are new to teaching		For all teachers who are new to the school		For all teachers in the school		There is no access to a mentoring system for teachers in the school	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**27**	**(4.1)**	**27**	**(3.7)**	**33**	**(4.4)**	**13**	**(3.7)**
Australia	19	(4.5)	39	(5.6)	39	(6.0)	3	(1.4)
Finland	5	(1.9)	23	(3.8)	6	(2.1)	65	(3.7)
Japan	50	(3.3)	10	(2.3)	19	(2.7)	20	(2.7)
Korea	34	(3.5)	21	(2.9)	31	(3.8)	14	(2.8)
Singapore	21	(0.1)	47	(0.3)	32	(0.2)	1	(0.0)
England (UK)	26	(4.3)	31	(3.6)	43	(4.8)	1	(0.6)
Flanders (Belgium)	6	(1.8)	65	(4.0)	7	(2.2)	21	(3.0)
TALIS Average	**27**	**(0.5)**	**22**	**(0.6)**	**25**	**(0.6)**	**26**	**(0.6)**

Source: OECD TALIS 2013 Database

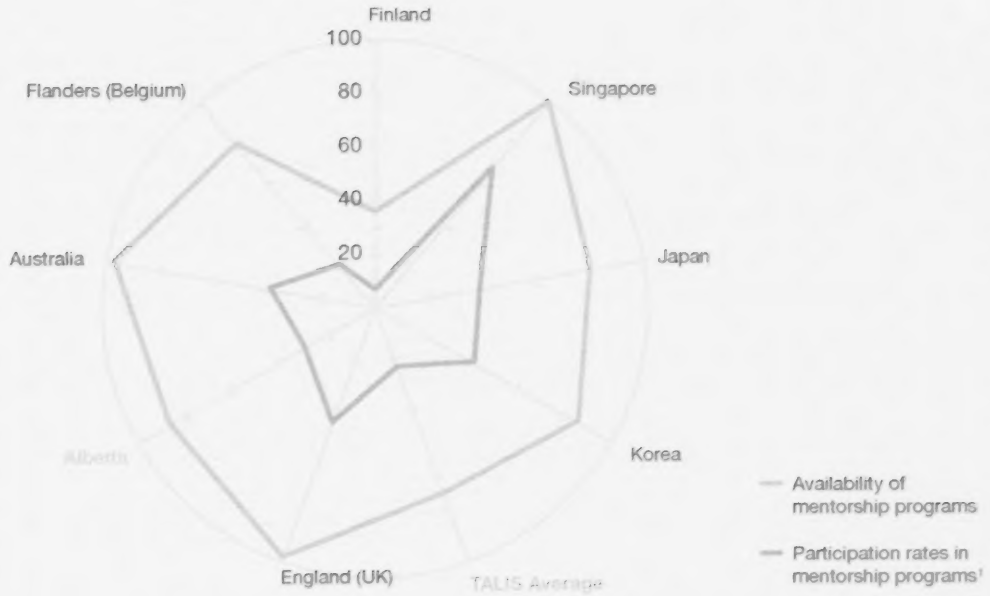
Figure 4.4 shows the proportion of teachers participating in mentorship programs as mentors or mentees. Figure 4.5 shows the availability of mentorship programs reported by school principals compared with the percentages of teachers who indicated that they are participating in a mentorship program in selected TALIS countries.

FIGURE 4.4 Participation in mentorship by teachers: percentage of lower secondary teachers currently serving as mentors or having a mentor in selected TALIS countries



Source: OECD TALIS 2013 Database

FIGURE 4.5 Comparison of access to mentorship programs and teachers' participation in mentorship programs for selected TALIS countries (countries are organized based on the size of the gap between availability and participation in mentorship programs)



1 Participation rate is the total number of teachers who have assigned mentors or are serving as mentors. There are a few teachers who are serving as mentors while at the same time are being mentored by other teachers.

Source: OECD TALIS 2013 Database

More than a third of teachers in Alberta are currently involved in mentorship programs. This participation rate is above the TALIS average, but far from the rates seen in Singapore where almost 80% of teachers participate. On the other hand, engagement in mentoring activities in Finland is rare—barely 7% of teachers report participation. This is understandable given that the majority of teachers in Finland work in schools where mentorship programs are not available.

In most of the countries shown in Figure 4.4, the proportion of teachers serving as mentors seems to be higher than the proportion of teachers reporting having a mentor. The situation is the same in Alberta where 21% of teachers indicated that they are serving as mentors but only 13% said they are being mentored. This would indicate the possibility that sometimes teachers may have more than one mentor assigned to them.

The gap between the availability of mentorship programs and participation in mentorship programs by teachers in Alberta is bigger than the TALIS average and bigger than in countries such as Finland, Singapore, Korea and Japan. Even though 87% of teachers in Alberta teach in schools where their principal indicated that there is a mentoring program (Table 4.4), only 30% of the teachers indicated that they are currently participating in a mentorship program as a mentor, a mentee or both (Figure 4.5). A further analysis would be required to better understand how targeting mentoring opportunities to particular groups of teachers, rather than making them universally available, impacts participation rates.

4.3 Participation in professional development

Alberta teachers' participation rate in professional development is very high by international standards, but they spend fewer days than average on professional development activities

"Effective professional development is ongoing, includes training, practice and feedback, and provides adequate time and follow-up support. Successful programs involve teachers in learning activities that are similar to ones they will use with their students, and encourage the development of teachers' learning communities. There is growing interest in developing schools as learning organizations, and in ways for teachers to share their expertise and experience more systematically"[4]. The first round of TALIS found that participation in professional development is common among teachers in the TALIS participating countries (OECD, 2009).

Table 4.3 shows the percentage of junior high school teachers in Alberta and selected TALIS countries who participated in professional development activities, and those who paid for some or all of the costs.

At 98%, Alberta and Singapore rank highest among TALIS countries with respect to the percentage of teachers who undertook some professional development activities in the 12 months prior to TALIS. The average participation rate in professional development across all TALIS countries is 88% with a range of 72% to 98%. This finding does not come as a surprise in Alberta—provincial policy requires that all certificated teachers develop annual professional growth plans based on self-assessments of their learning needs relative to the Teaching Quality Standard. In other words, professional development is mandated in Alberta, and 100% participation is expected.

On the other hand, it is interesting to note that teachers in Finland, who have less access to induction programs and mentoring opportunities than their international peers, also have lower participation rates in professional development (79%) than teachers in other PISA leading countries.

4 OECD, 2005. Teachers Matter: Attracting, Developing and Retaining Effective Teachers. OECD, Paris.

TABLE 4.3 Teachers' participation in professional development activities in the previous 12 months and personal financial costs of professional development activities

	Participation rate in professional development		Percentage of teachers who had to pay for "none," "some" or "all" of professional development activities undertaken					
			None		Some		All	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**98**	**(0.4)**	**62**	**(1.5)**	**36**	**(1.5)**	**2**	**(0.4)**
Australia	97	(0.5)	75	(1.5)	24	(1.3)	2	(0.4)
Finland	79	(1.0)	73	(1.1)	22	(1.0)	6	(0.6)
Japan	83	(0.8)	56	(1.4)	33	(1.2)	11	(0.8)
Korea	91	(0.6)	25	(1.1)	64	(1.3)	11	(0.8)
Singapore	98	(0.3)	90	(0.5)	9	(0.5)	1	(0.1)
England (UK)	92	(0.7)	93	(0.7)	6	(0.6)	1	(0.3)
Flanders (Belgium)	88	(0.9)	87	(0.7)	10	(0.7)	3	(0.4)
TALIS Average	**88**	**0.1**	**66**	**0.2**	**25**	**0.2**	**8.6**	**0.1**

Source: OECD TALIS 2013 Database

About 36% of junior high school teachers in Alberta who participated in professional development paid for some of the costs involved, and only 2% had to pay for all the costs involved. This percentage is similar across TALIS countries where about 34% pay for some or all of the professional development costs.

In countries such Singapore and England (UK) 90% or more of the teachers do not pay for any of their professional development costs. However, the data does not show that there is an apparent link between the rate of participation in professional development and the proportion of teachers reporting that they had to pay for it. Alberta teachers' participation rate in professional development is well above the TALIS average even though a relatively higher proportion of teachers pay for professional development. In contrast, in Finland, the proportion of teachers participating in professional development activities for which they had to pay at least part of the cost is lower than the TALIS average, but so is the proportion of teachers participating in professional development activities.

FIGURE 4.6 Participation rates in various types of professional development activities in Alberta in the 12 months prior to the TALIS survey

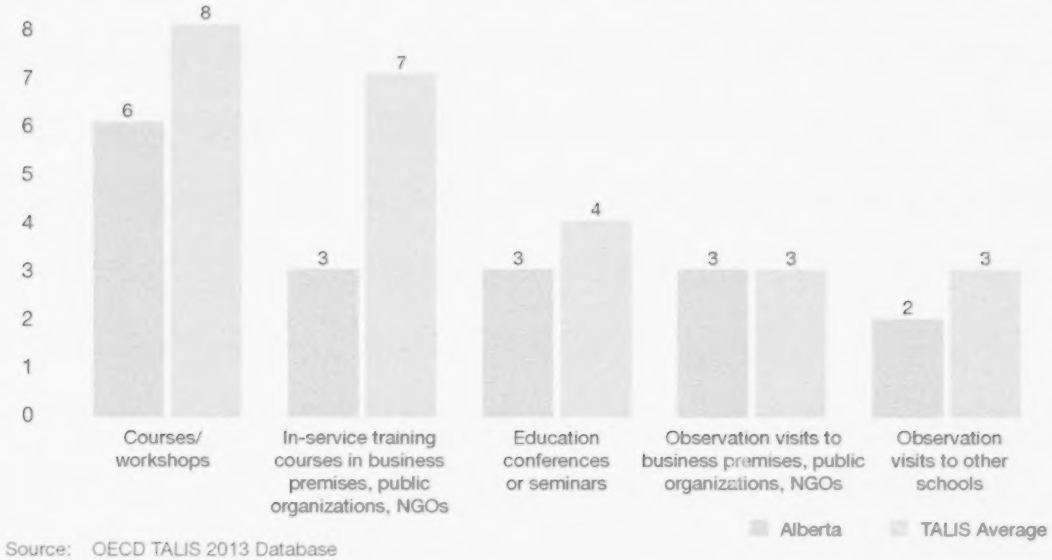
Source: OECD TALIS 2013 Database

Figure 4.6 shows the percentage of teachers who participated in various professional development activities. Figure 4.7 shows the average number of days they spent on a selected number of professional development activities.

The most common professional development activities for junior high school teachers in Alberta are courses and workshops. Within the year prior to TALIS, 85% of teachers attended courses or workshops on subject matters or teaching methods and/or other education-related topics for an average of six days. The next common activity is participation in conferences and seminars where teachers and/or researchers present their research results and discuss educational issues: 74% of Alberta teachers participate in such conferences and seminars for an average of three days per year. About 63% of junior high school teachers also engage in professional learning networks as a form of ongoing professional development.

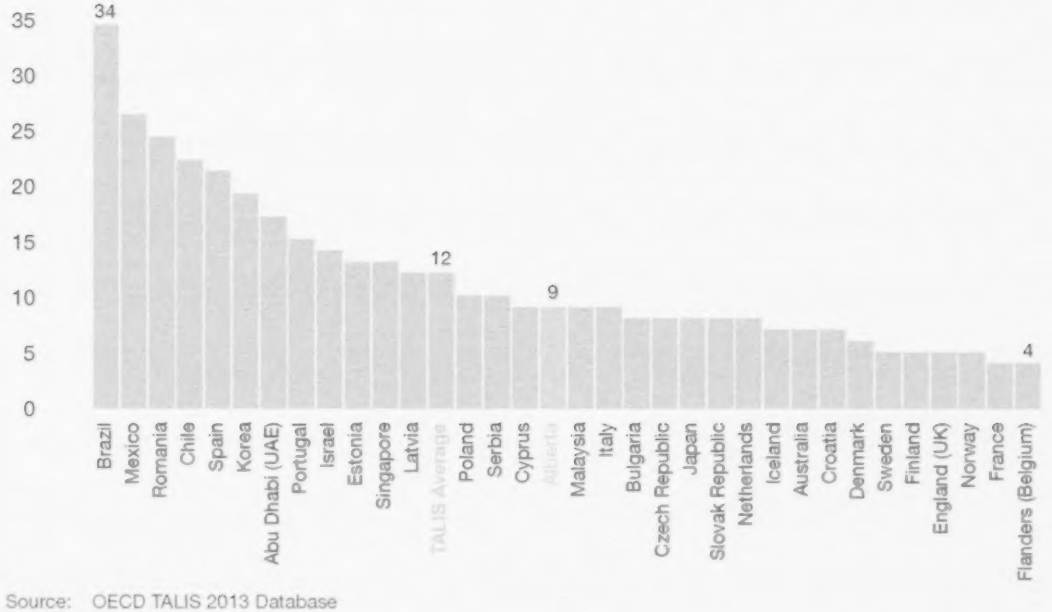
At the other end of the spectrum, only 20% of junior high school teachers in Alberta participate in observation visits to other schools. Even smaller proportions participate in programs leading to qualifications or in observation visits to businesses, public organizations or NGOs. The last two types of professional development opportunities are the only two in which participation rates among teachers in Alberta are lower than those of their international peers. Alberta teachers' participation rates are higher than the TALIS averages for all other types of professional development activities. However, teachers in Alberta spend fewer days than average on all professional development activities. This pattern is similar to what we have seen with respect to principals' participation in professional development opportunities—their participation rates in Alberta are higher than the TALIS average, but the amount of time devoted to these activities is smaller than the TALIS average.

FIGURE 4.7 Average number of days spent by Alberta junior high teachers on various professional development activities in a year



Source: OECD TALIS 2013 Database

FIGURE 4.8 Average total number of days spent by teachers for professional development



Source: OECD TALIS 2013 Database

Figure 4.8 shows the total number of days spent by teachers on professional development activities, excluding qualification programs, on-going participation in networks, mentoring and/or peer observation. A typical junior high school teacher spends about nine days in a year on professional development activities such as courses, workshops, conferences and observation visits. This amount is below the TALIS average of 12 days spent on the same types of activities. Teachers in Brazil spend the most days (34 days) on professional development activities, and teachers in France and Flanders (Belgium) spend the least number of days (four days). Teachers in some high PISA performing countries like Singapore and Korea spend above average number of days for professional development, while others such as Finland and Japan spend below average number of days.

4.4 Teachers' perceptions about professional development

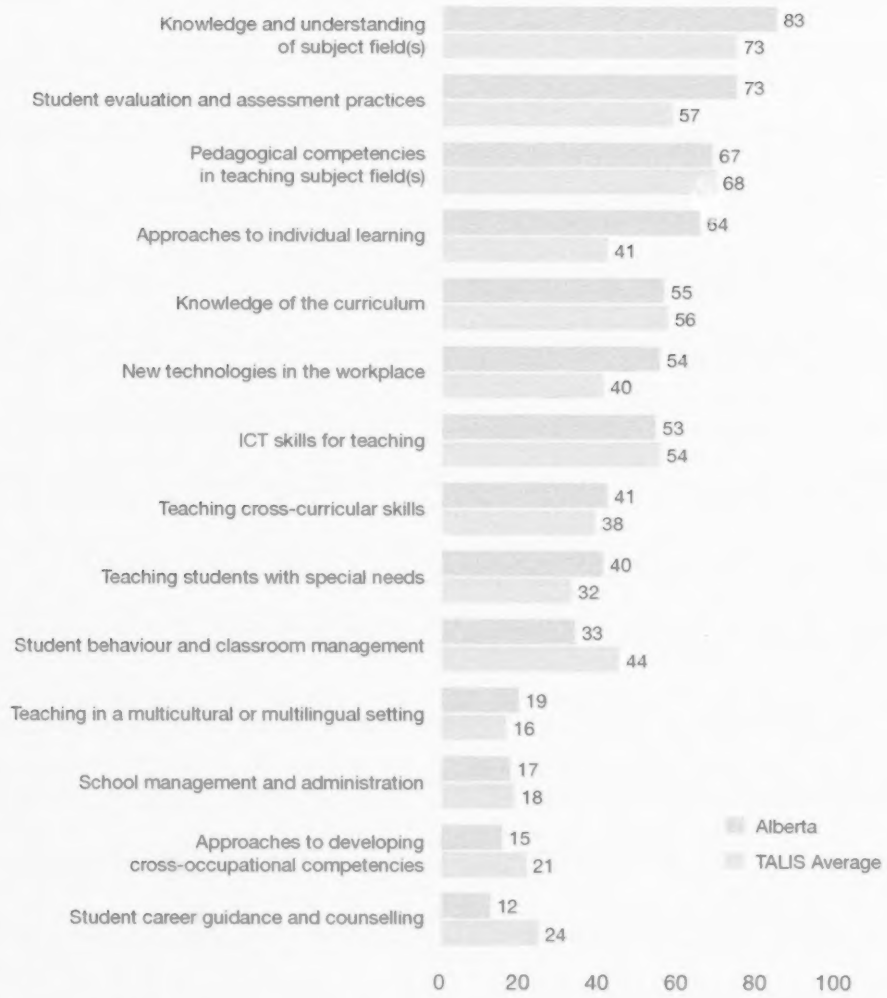
Overall, Alberta teachers are positive in their perception of professional development's effectiveness, but are less positive than their TALIS peers

TALIS asked teachers whether their professional development covered any of 14 specific topics, and if so, whether it had a positive impact on their teaching. Figure 4.9 shows the proportion of teachers who participated in professional development activities in which a particular content area was addressed. Figure 4.10 shows the perceived impact of their participation in these professional development activities on their teaching.

The most common content area of professional development in which teachers participated was knowledge and understanding of subject field(s), while the area with the least participation was student career guidance and counselling. In Alberta, 83% of junior high school teachers participated in professional development where the content focused on knowledge and understanding of their subject field compared to only 12% who indicated that their professional development focused on student career guidance and counselling.

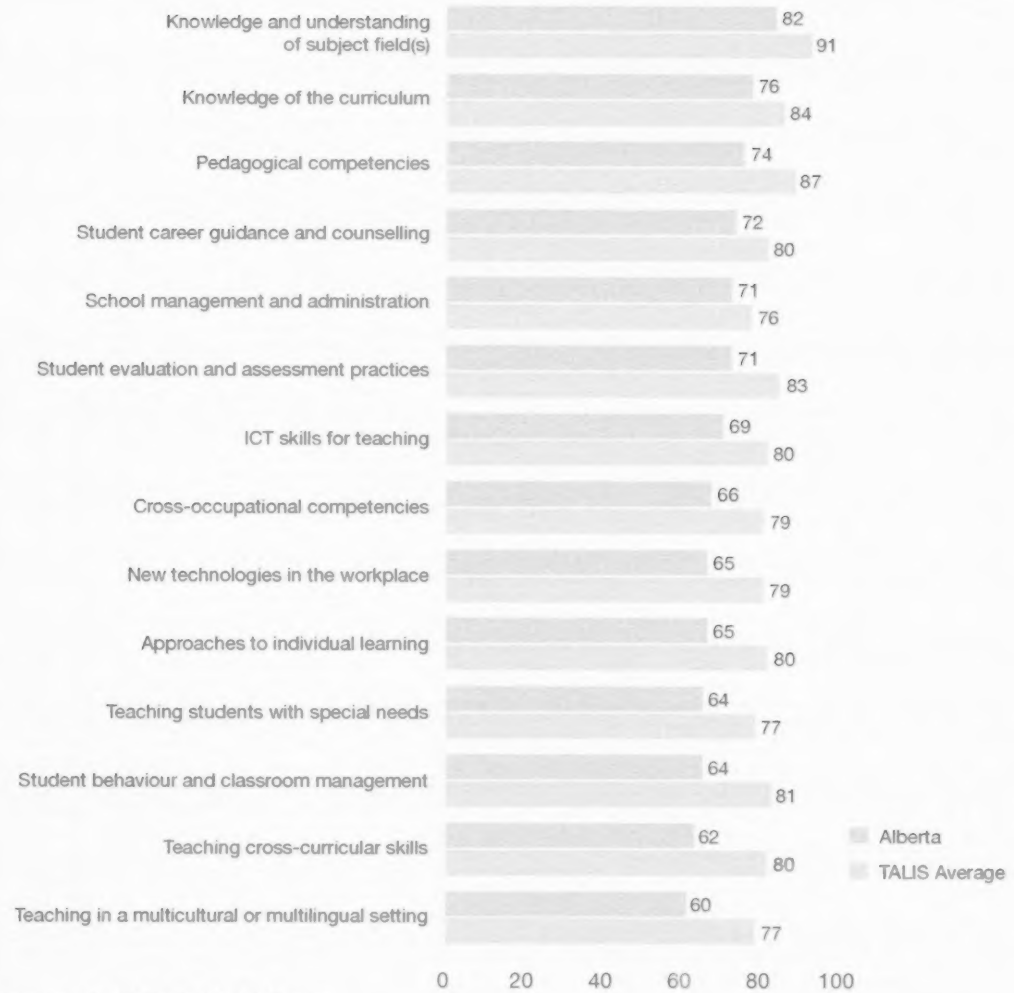
There were a few areas in which teachers in Alberta differed significantly from their TALIS peers. In particular, teachers in Alberta were significantly more likely to participate in professional development activities that focus on approaches to individualized learning (a 23 percentage points difference); student evaluation and assessment (20 percentage points difference); and new technologies in the workplace (14 percentage points difference). On the other hand, teachers in Alberta were less likely than their international peers to participate in professional development that focuses on student behaviour or class management issues or student guidance.

FIGURE 4.9 Percentage of teachers in junior high schools in Alberta who participated in professional development with the following content in the 12 months prior to the TALIS survey



Source: OECD TALIS 2013 Database

FIGURE 4.10 Percentage of teachers in junior high schools in Alberta who reported that the positive impact of professional development on their teaching was moderate to large in the following areas



Source: OECD TALIS 2013 Database

However, when it comes to perceptions of the impact that professional development focusing on a particular topic had on their practices, teachers in Alberta were consistently less likely to report positive impact than their international colleagues. This lower likelihood of identifying positive impacts occurs despite the fact that the majority of teachers in Alberta (between 60% and 82%) who participated in a professional development activity focusing on a particular topic reported at least a moderately positive impact resulting from that participation.

Teachers found professional development focusing on content and pedagogical knowledge in their subject field to be the most likely to have a positive impact on their teaching. Other content areas where a relatively higher proportion of teachers reported moderate to high positive impact include knowledge of the curriculum (76%) and pedagogical competencies in teaching their subjects (74%). The data suggest that there is no connection between the proportion of teachers participating in a particular PD activity and the perceived impact on teaching. In other words, the fact that few teachers participate in a particular activity does not appear to mean that the activity is not perceived as being valuable among those who participated. For example, professional development focusing on student career guidance and counselling was perceived to be effective (72% of teachers reported moderate to positive impact) even though very few (12%) of the teachers participated in professional development with such content. Another area that had a low participation rate but a relative high perceived impact is school management and administration. Only 19% of teachers had professional development focusing on school management and administration, but the majority (71%) of them indicated that it had a moderate or large positive impact on their teaching. Teaching in a multicultural or multilingual setting recorded a very low participation rate (19%) and the lowest impact (60%).

Overall, Alberta teachers' perception of effectiveness was generally positive (at least 60% reported moderate to large positive impact) for all content areas, but it is lower in comparison with the TALIS averages, which ranged from 76% to 91%. Alberta teachers have above-average participation in professional development, but below-average perceptions of positive impact of participation in professional development on their teaching.

4.5 Areas of development needs

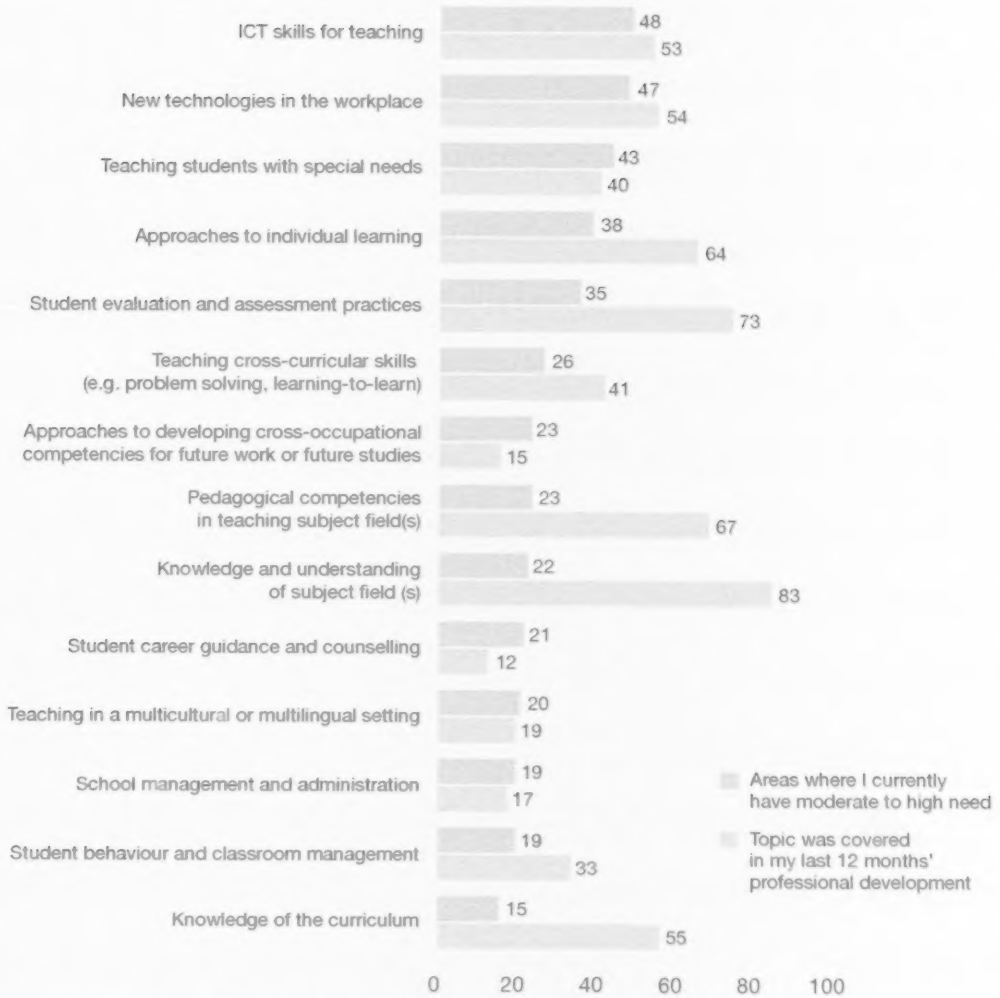
The supply of professional development opportunities in Alberta in terms of what is covered seems to meet and exceed the demand with only a few exceptions

The professional development teachers report receiving may not always meet the needs of teachers. To determine the degree to which their professional development needs are met, we first show what is available for teachers by comparing the proportion of teachers participating in various professional development activities with the proportion of teachers expressing a need in those areas. We next compare the proportion of teachers reporting a need in specific areas with the proportion of those in this group who did not participate in professional development. These comparisons show the mismatch between demand and supply.

Figure 4.11 presents the percentage of teachers who report moderate to high levels of need in various aspects of their work compared to the content areas of professional development they received during the past 12 months. For the vast majority of the areas, the proportion of teachers who take professional development that covers certain themes was greater than the proportion who indicated needs for such content. In some areas, the proportion of teachers reporting a need in a particular area was two to four times smaller than the proportion of teachers participating in professional development activities focusing on corresponding areas.

Thus, the overall supply of professional development opportunities in terms of what is covered seems to meet and exceed the demand with only a few exceptions, such as student career guidance or developing cross-occupational skills.

FIGURE 4.11 Percentage of junior high school teachers in Alberta who report moderate to high levels of need in various aspects of their work compared with the percentage of teachers whose professional development over the past 12 months focused on the same content areas



Source: OECD TALIS 2013 Database

The aspects most frequently cited by teachers as areas of moderate to high development need include information and communication technology (ICT) skills for teaching, new technologies in the workplace and teaching students with special needs. In Alberta, 40% to 48% of junior high school teachers indicated that they have a moderate to high level of development need in these areas, and the number of teachers who had professional development that focused on the same areas ranged from 40% to 54%. For example, 43% of teachers expressed the need for training in teaching students with special needs, while at the same time 40% of teachers had the opportunity to participate in professional development that covered that topic. Similarly, 48% of teachers expressed the need for training in ICT skills for teaching, while at the same time 53% of teachers had the opportunity to participate in professional development that covered that topic. A number of areas, such as knowledge and understanding of subject fields and student evaluation and assessment practices, offer more opportunities for teachers to receive professional development compared to relatively smaller proportions of teachers who have moderate to high development needs in those areas.

The proportion of teachers participating in professional development activities that cover specific areas is similar to the proportion of teachers expressing the need for professional development in these areas. This pattern does not mean that all teachers with a particular need can, and do, participate in professional development focusing on the topic. A further analysis was conducted to determine how many of the teachers who expressed moderate to high needs in various topic areas received any professional development in those same areas within the last 12 months. The results are presented in Table 4.4.

Teachers who needed development in student career and guidance counselling and approaches to cross-occupational competencies, as well as teaching in multicultural settings, had the least opportunity to receive training on those topics. At least 70% of teachers with needs in these areas did not participate in professional development that focused on these areas of need.

School management and administration, teaching cross-curricular skills, teaching students with special needs and student behavior and classroom management are other areas where at least half of the teachers with development needs did not participate in appropriate professional development. Knowledge and understanding of subject fields was an area where the majority of teachers with expressed needs in that area (82%) had the opportunity to participate in professional development that matches the need.

TABLE 4.4 Percentage of teachers with moderate to high development needs on various topics who did not have any professional development on those topics in the last 12 months in Alberta

	% of teachers with moderate to high development needs	% of teachers with moderate to high development needs who did not have any PD on this topic in the last 12 months	
	%	%	(S.E.)
Student career guidance and counselling	21	76	(2.1)
Approaches to developing cross-occupational competencies for future work or future studies	23	75	(2.6)
Teaching in a multicultural or multilingual setting	20	70	(2.6)
School management and administration	19	58	(3.0)
Teaching cross-curricular skills (e.g., problem solving, learning-to-learn)	26	54	(3.2)
Teaching students with special needs	43	54	(2.7)
Student behaviour and classroom management	19	53	(3.5)
ICT skills for teaching	48	40	(2.3)
Knowledge of the curriculum	15	40	(3.4)
New technologies in the workplace	47	38	(2.3)
Approaches to individual learning	38	30	(1.8)
Pedagogical competencies in teaching subject field(s)	23	28	(2.7)
Student evaluation and assessment practices	35	24	(2.4)
Knowledge and understanding of subject field(s)	22	18	(2.5)

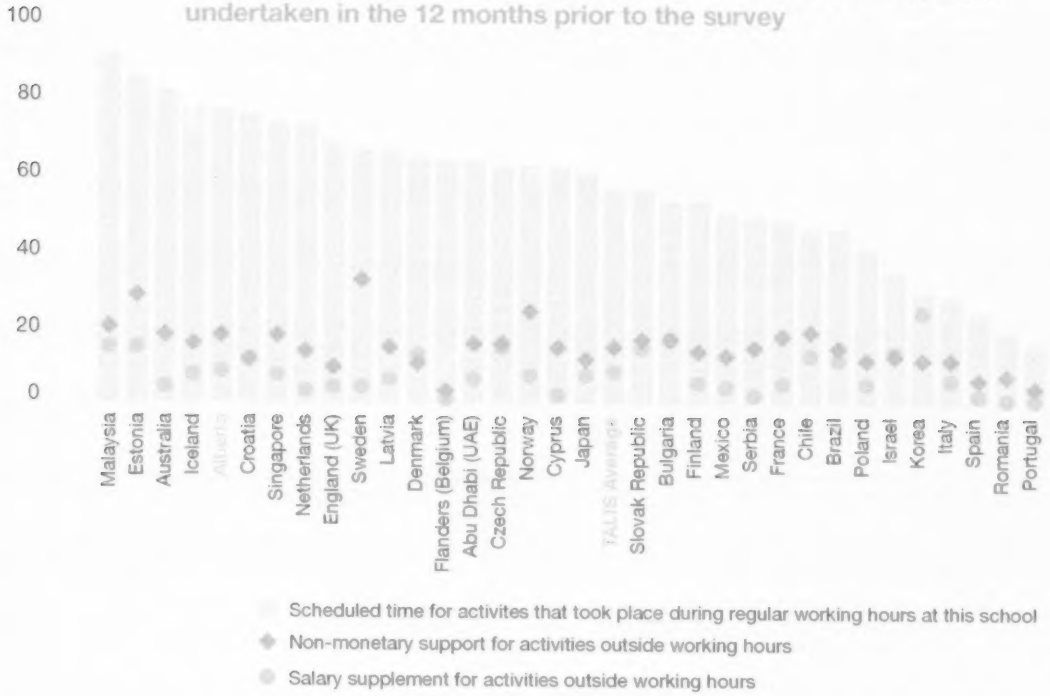
Source: OECD TALIS 2013 Database

4.6 Support for professional development

Alberta teachers receive more support for professional development in the form of scheduled time than teachers in most TALIS countries

The TALIS teacher questionnaire asked teachers about how their participation in professional development was supported. TALIS distinguished between financial support, or salary supplements for undertaking these activities, and non-monetary support for activities outside working hours (e.g., reduced teaching load, days off, study leave, etc.). Figure 4.12 presents the data on the proportion of teachers who report receiving various types of supports for professional development that they took in the 12 months prior to the TALIS survey.

FIGURE 4.12 Percentage of teachers in lower secondary education who report having received support for the professional development undertaken in the 12 months prior to the survey



Source: OECD TALIS 2013 Database

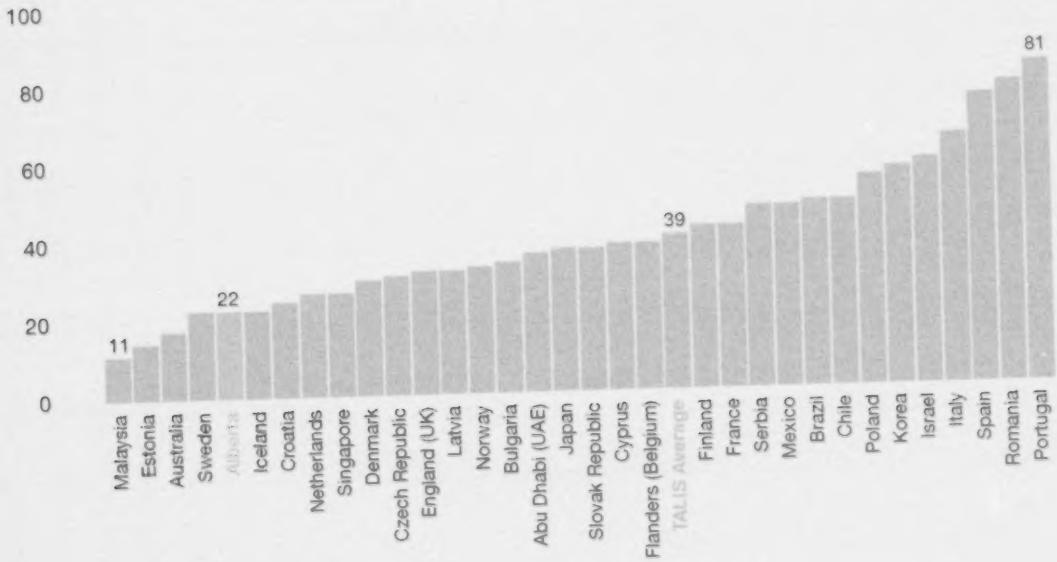
The data suggest that support provided for teachers to undertake professional development mainly comes in the form of scheduled time for activities during regular working hours rather than in the form of monetary support. In every participating TALIS country, the proportion of teachers who receive support in the form of scheduled time is several times larger than the proportion whose participation in professional development is supported by salary supplements.

Alberta is ranked fifth among TALIS participants in the provision of support for professional development in the form of scheduled time during regular working hours at school. Of junior high school teachers in Alberta, 75% indicate that they received support for professional development in the form of scheduled time off. The TALIS average is 54% and ranges from 15% (Portugal) to 88% (Malaysia).

Alberta is also at the TALIS average on the provision of monetary support in the form of a salary supplement for professional development activities outside working hours. Only 8% of junior high school teachers in Alberta and across all TALIS countries report having received salary supplements for professional development activities outside working hours.

Figure 4.13 compares TALIS countries on the proportion of teachers who do not receive any support for professional development. Portugal is at the top of the list with 81% of teachers not receiving any support for professional development activities. Malaysia (11%) has the smallest proportion of teachers who receive no support for professional development. At 22%, Alberta is among the TALIS countries where a relatively small proportion of teachers receive no support for professional development. Alberta therefore has high participation in professional development coupled with high support for teachers participating in professional development activities. In countries such as Finland, participation in professional development is significantly lower than in Alberta and among those teachers participating, the proportion not receiving any support is significantly larger than in Alberta.

FIGURE 4.13 Percentage of teachers in lower secondary education who report not receiving any type of support for the professional development undertaken in the 12 months prior to the survey



Source: OECD TALIS 2013 Database

4.7 Professional development strategies

Professional development activities for teachers in Alberta occur mostly as one-time, or short-term events, rather than for an extended period of time

A number of characteristics influence the effectiveness of professional development. Dennis Sparks[5] outlined a vision for professional learning based on a number of initiatives that stress the need for high-quality professional development that focuses on deepening teachers' content knowledge and pedagogical skills. This vision includes opportunities for practice, research and reflection; is embedded in educators' work and takes place during the school day; and is sustained over time. A review of several research studies on this issue concluded that professional development that includes a substantial number of hours spread out over 6 to 12 months shows positive and significant effects on student achievement gains.[6]

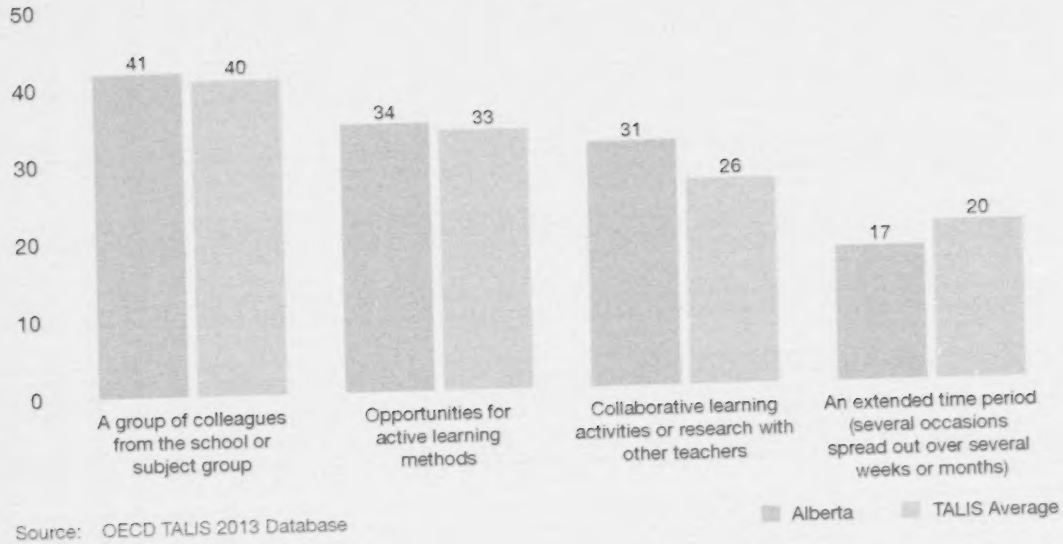
TALIS asked teachers to indicate the extent to which the professional development activities in which they took part during the past 12 months included study groups; opportunities for active learning; collaborative learning activities or research with other teachers; and activities that extend over an extended period of time. The results are provided in Figure 4.14.

Less than 50% of teachers in Alberta reported that most or all of their professional development activities involved any of the strategies listed: 41% of the teachers indicated that in most or all of their professional development activities they were involved in a group of colleagues in their school or a subject group; 34% of the teachers had more opportunities for active learning methods; and only 17% had professional development activities that mostly or usually extend over a period of time. This means that for most of the teachers, professional development activities still occur mostly as one-time, or short-term events, rather than covering an extended period of time, which the literature suggests as being more effective. Alberta, however, does not appear to be unique in this regard when the results are compared with the TALIS averages. Across all TALIS countries only 20% of teachers engage in professional development activities that usually extend over a period of time.

5 Sparks, Dennis. 2002. Designing Powerful Professional Development for Teachers and Principals. National Oxford, OH: Staff Development Council.

6 Yoon, K.S., T. Duncan, S.W.-Y. Lee, B. Scarloss and K. Shapley, 2007. Reviewing the evidence on how teacher professional development affects student achievement. *Issues & Answers Report*, REL 2007—No. 033. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from: ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2007033.pdf.

FIGURE 4.14 Percentage of junior high school teachers in Alberta who indicated that the following strategies were included in most or all professional development activities that they took part in during the last 12 months



Source: OECD TALIS 2013 Database

4.8 Barriers to professional development

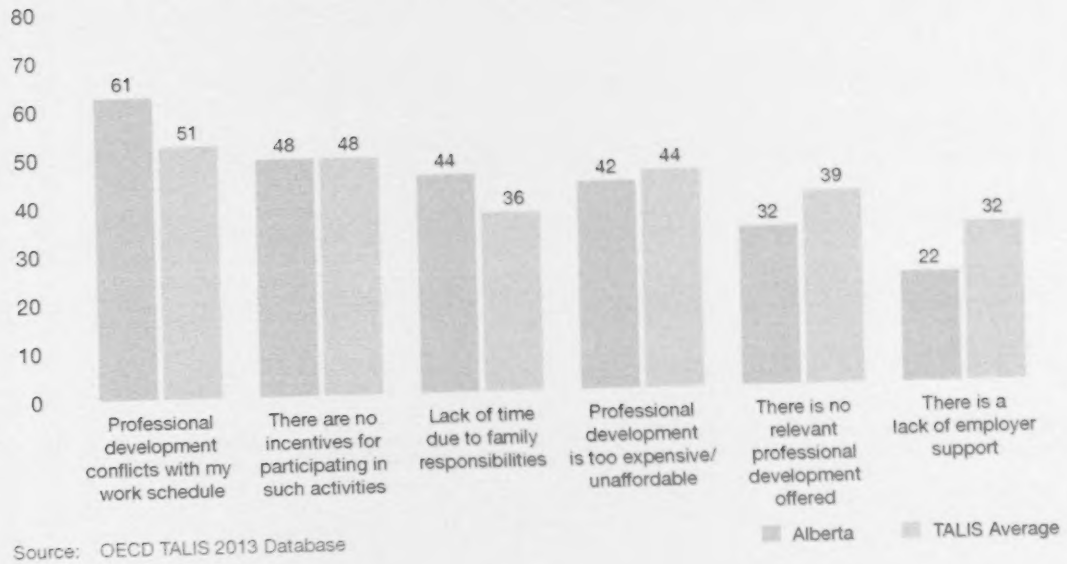
More teachers in Alberta perceive conflict with work schedule and family responsibilities as barriers to participating in professional development than the average for all TALIS countries

TALIS asked teachers to indicate what barriers they face regarding their participation in professional development. The responses from this question are presented in Figure 4.15.

Alberta junior high teachers cite conflict with work schedule as the most common barrier to participation in professional development. More than half (61%) of teachers identified this as barrier, which is about 10% above the TALIS average of 51%. In addition to conflict with work schedule, a significant number of teachers (44%) also report that family responsibilities prevent them from finding time for professional development. These two barriers are all related to time and can be addressed by having more professional development opportunities scheduled within regular school hours. Although 75% of junior high school teachers in Alberta indicate that they receive support for professional development in the form of scheduled time (Figure 4.12), they still see conflict with work schedule and family responsibilities as barriers—the amount of scheduled time may not be enough to meet their professional development needs.

The next set of barriers to professional development reported by teachers is related to a lack of incentives and cost. Almost half (48%) of teachers indicated that there are no incentives for participating in professional development, and 42% indicated that it is too expensive or unaffordable. As reported in Table 4.3, 38% of teachers reported that they had to pay for some or all of the costs of their professional development. Only 8% of teachers indicated that they receive any form of monetary support for professional development (Figure 4.12).

FIGURE 4.15 Percentage of junior high school teachers in Alberta who agree or strongly agree that the following reasons represent barriers to their participation in professional development



Source: OECD TALIS 2013 Database

Another common barrier to participation in professional development identified by teachers is the availability of opportunities that are relevant to their needs: 32% of teachers indicated that they simply do not have access to relevant professional development offerings to fit their needs. This ties in with the expression of these needs identified in Figure 4.11 and Table 4.4. This finding provides further evidence to indicate that gaps exit between the professional development opportunities available to teachers and what teachers are looking for to meet their specific development needs.

4.9 Summary

Data from TALIS show that Alberta teachers have better access to induction and mentoring programs to help them to become competent and effective professionals compared to most other TALIS participants. There appear to be discrepancies in what principals report on the availability of induction and mentoring programs and what teachers report in terms of participation. If what principals are reporting is accurate, then teachers are not taking full advantage of the induction and mentoring programs available to them. Less experienced teachers participate more in induction programs than more experienced teachers, which could indicate that experienced teachers may not have had that much opportunity at the beginning years of their teaching compared to those who entered the teaching profession recently.

Overall, participation in professional development is very high, which is expected in Alberta because all teachers are expected to have professional growth plans. The supply of professional development opportunities seem to match, or even exceed, the demand in most areas. However, there are areas in which over 70% of teachers with a need for professional development did not participate in professional development activities covering these areas.

Support for professional development is also high in Alberta compared to other TALIS countries. Support comes mainly in the form of scheduled time for activities rather than in the form of monetary supplement for Alberta and for most other TALIS countries.

The most common professional development activities for teachers in Alberta include courses, workshops, seminars, conferences and professional networks. The most common areas of focus include knowledge of content and understanding of subject matter, student evaluation and assessment practices, pedagogical competencies and approaches to individual learning. The areas of highest need for development reported by teachers include ICT skills for teaching, new technologies in the workplace and teaching students with special needs.

The methods, or strategies, for professional development in Alberta are similar to what is employed in most TALIS countries. These include professional learning groups, opportunities for active learning and collaborative work. In Alberta, fewer teachers than the TALIS average engage in professional development that extends over a longer period of time. This finding is potentially concerning because the literature suggests that longer-term professional development is more effective.

Even though teachers in Alberta are more likely to participate in professional development than teachers in most TALIS countries, they spend fewer days on professional development than their peers. Moreover, teachers in Alberta are less likely to perceive professional development to be effective compared to the TALIS average.

Despite the high level of participation in Alberta, a number of barriers to professional development may be preventing teachers from engaging in more professional development activities to meet their specific needs. These include conflicts with work schedule, lack of incentives, lack of time because of family responsibilities, cost and lack of opportunities, which are relevant to the need of teachers.

CHAPTER 5

Teacher Feedback and Formal Appraisal

Teacher Feedback and Formal Appraisal

Research has consistently shown that effective teachers are key to ensuring that students perform well. Also, according to research,[1] high-performing school systems make it a priority to develop their teachers to be effective and to put systems in place to ensure that all children are able to benefit from good teaching practices.

Teacher appraisal and feedback provide teachers with valuable information to better understand and improve their teaching practices. When teachers receive feedback on their teaching, it creates opportunities for them to improve these practices, which, in turn, can have a powerful impact on student learning and outcomes. Research studies show that when teachers receive feedback that is focused on student performance, student performance is likely to increase by as much as 20% to 30%.[2,3]

Teacher appraisal and feedback can encompass a number of activities. TALIS collected information from school principals on formal teacher appraisal and from teachers on feedback they receive and their views about teacher appraisal and overall feedback systems in the school. These terms are defined as follows:

- ***Formal teacher appraisal*** occurs when a teacher's work is reviewed by the principal, an external inspector or his or her colleagues. Formal teacher appraisal is part of a formalized performance management system, often involving set procedures and criteria, rather than a more informal approach (e.g., through informal discussions).
- ***Teacher feedback*** is broadly defined and includes any communication teachers receive about their teaching, based on some form of interaction with their work (e.g., observing classrooms and the teaching of students, discussing teachers' curriculum or the results of their students). This feedback can be provided through informal discussions or as part of a more formal and structured arrangement.
- ***Teacher appraisal and more general feedback provided in the school*** includes reviews of teachers' work that can be conducted in a range of ways from a more formal approach (e.g., as part of a formal performance management system, involving set procedures and criteria) to a more informal approach (e.g., through informal discussions).

Chapter 5 focuses on issues of who provides feedback to teachers; what proportion of teachers receive or do not receive feedback or undergo formal appraisal; what is the basis on which appraisal and feedback are provided; what is their focus and intended outcomes; how effective is appraisal and feedback in achieving their intended outcomes; and what impact it has on teachers. It starts with data pertaining to teacher feedback in general that includes feedback from formal appraisal as well as feedback from other informal mechanisms. This section is followed by a discussion of teachers' views on formal appraisal and feedback in their school. The final section focuses exclusively on formal teacher appraisal based on responses provided by principals.

1 Barber, M., and M. Mourshed, 2007. How the World's Best-Performing Schools Come Out on Top. McKinsey and Company.
2 Fuchs, L.S., and D. Fuchs, 1985. A quantitative synthesis of effects of formative evaluation on achievement. 69th Annual Meeting of the American Educational Research Association. Chicago.
3 Hattie, J, 2009. Visible learning. A synthesis of over 800 meta-analyses relating to achievement. Milton Park, UK, Routledge.

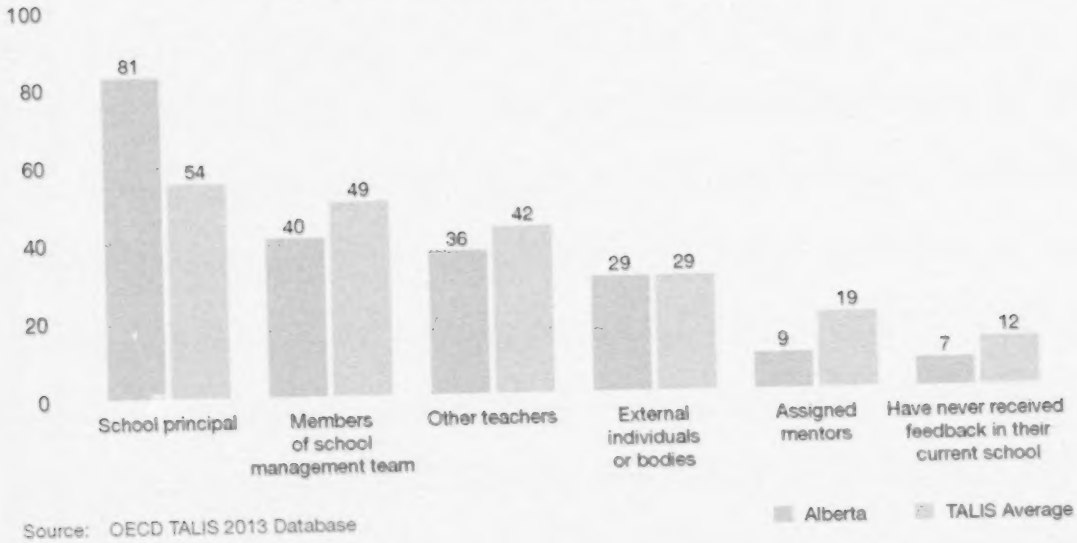
5.1 Teacher feedback

The school principal is the most common source of feedback for junior high teachers in Alberta

In TALIS, teachers were asked specifically about the feedback they personally receive in their school. Only 7% of junior high teachers in Alberta have never received feedback in the school where they currently teach. The majority (81%) of Alberta junior high school teachers report receiving feedback on their teaching from the school principal. This percentage is well above the average among TALIS countries, which is only 54% (Figure 5.1). The finding is consistent with responses gathered from principals (discussed later) that indicate school principals are the most important source of information and feedback on teachers' work.

Aside from the principal, approximately 40% of teachers receive feedback from members of the school management team. Slightly over a third (36%) receive feedback from their peers. Only 9% of teachers report receiving feedback from assigned mentors even though 13% of junior high school teachers in Alberta indicated that they have an assigned mentor to support them. This finding means that 30% teachers who have mentors do not get any feedback from their mentors. Further research is required to understand how feedback functions with regard to mentorship.

FIGURE 5.1 Percentage of junior high school teachers in Alberta who report receiving feedback from various sources and teachers who report never having received feedback in their school



Source: OECD TALIS 2013 Database

Teachers' feedback is based mainly on classroom observations and on the analysis of test scores

TALIS asked teachers about the sources of information upon which the feedback they receive is based. Options included information gathered from classroom observation; student surveys; assessments of teachers' content knowledge; analysis of student test scores; self-assessments of their work; and feedback from parents (including parent surveys). The responses provided by teachers are presented in Figure 5.2.

The three sources of information that teachers in Alberta most frequently mentioned as the basis of feedback did not differ significantly from what was reported in other TALIS countries. A great majority (84% in Alberta and 70% TALIS average) of teachers report that they receive feedback following classroom observation. This finding is encouraging because classroom observation that provides feedback for teachers to improve their learning has been found to have a significant effect on student learning.[4]

The analysis of student test scores is the next most common source of data upon which feedback to teachers is based. In Alberta, 61% of teachers reported that they receive feedback based on the analysis of students' test scores. On average across TALIS countries, 64% of teachers report that they receive feedback on their teaching following analysis of their students' test scores. Finally, surveys or discussions with parents was also identified by more than half (57%) of the teachers in Alberta as a source of feedback. This percentage is slightly above the TALIS average of 53%.

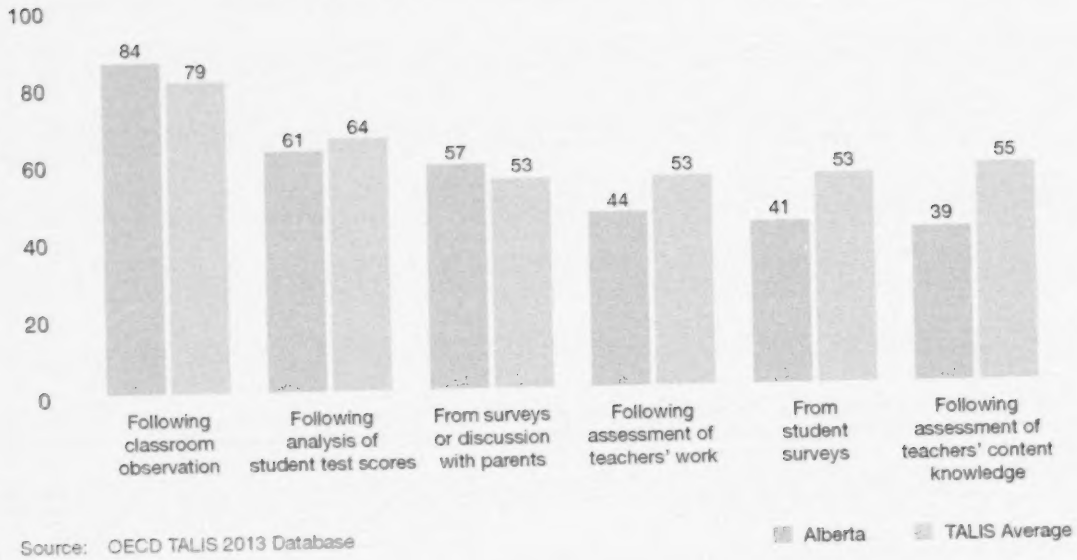
Teachers in Alberta are significantly less likely than their international colleagues to receive feedback that is based on assessment of their work (44% in Alberta compared to 53% for the TALIS average) or of their content knowledge (39% in Alberta compared to 55% of the TALIS average).

Principals in Alberta are more likely to provide feedback to teachers to support the growth of a well-performing teacher or when there is less-than-expected teacher performance

Principals in Alberta were asked to identify the three most common reasons for observing a teacher's instruction and for then providing feedback to that teacher. The results are provided in Table 5.1.

4 Zwart, R.C., T. Wubbels, T.C.M. Bergen and S. Bolhuis, 2007. Experienced teacher learning within the context of reciprocal peer coaching. Teachers and Teaching: theory and practice. 13(2): 165–187. expertisecentrumlerenvandocenten.nl/files/TTTP_collegiale_coaching_0.pdf.

FIGURE 5.2 Percentage of junior high teachers who report receiving feedback based on the following sources of information



Source: OECD TALIS 2013 Database

TABLE 5.1 Percentage of Alberta junior high school principals who identified the following as one of the three most common reasons to observe teachers' instruction and to provide them with feedback[1]

	%	(S.E.)
To support continued growth of a well-performing teacher	66	(3.9)
Less than expected/desired teacher performance	54	(4.1)
At the request of the teacher	46	(3.9)
Less than expected/desired student performance	46	(3.5)
Parent or student complaint	38	(3.6)
Cyclical requirement	37	(3.7)

1 Reponses were obtained from an Alberta-specific question to school principals about teacher feedback. There are no international averages to compare with.

Source: OECD TALIS 2013 Database

These results indicate that feedback provided by school principals are mainly focused on helping teachers to improve their teaching. The most common reason provided by principals for providing feedback to teachers (identified by 66% of principals) was to support continued growth of a well-performing teacher. The next common reason for principals to observe teachers and provide them with feedback is when they have concerns about a teacher's performance. This reason was identified by 54% of the principals. It is interesting to note that the top two reasons focus on improving teacher performance.

Poor student performance was only identified by less than half (46%) of the principals as one of the three most common reasons why they observe teachers' instruction and provide feedback. However, teachers' responses discussed in the next section indicate that student performance is strongly emphasized in the feedback they receive. Teachers requesting the feedback themselves was another reason for principal's providing feedback—it was mentioned with similar frequency as inadequate student performance. Complaints from parents or students were common reasons for only 38% of principals.

Also of interest is the fact that the proportion of principals who observe teachers' instruction in their schools as part of their routine is even smaller. It would appear then that principals observe teachers in their classroom with a fairly well-defined purpose, rather than as part of a routine.

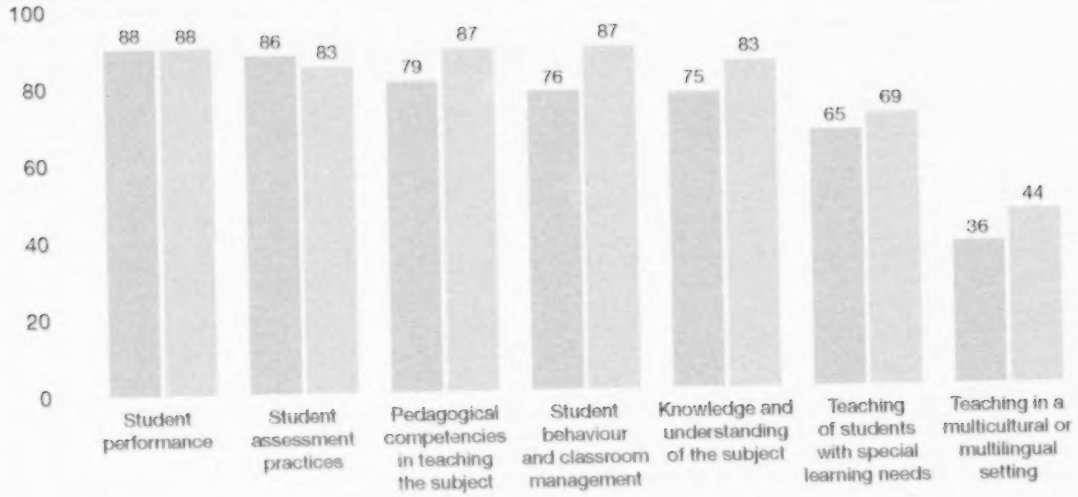
Teacher feedback in Alberta has a strong emphasis on student performance and assessment practices

Figure 5.3 shows teachers' responses to the question about the emphasis of the feedback they receive. The results showed that multiple areas are emphasized in the feedback provided to teachers. This include areas related to student performance, student assessment practices, teachers' knowledge and understanding of subject content, student behaviour and classroom management, as well as issues related to teaching students with special needs or teaching in multicultural setting.

Most of the teachers (88%) reported that student performance is given moderate or high importance. This percentage is the same as the average for all TALIS countries. The next area that received moderate to high emphasis by a high percentage (86%) of teachers is student assessment practices, which was the only area that was above the TALIS average. Alberta teachers' responses for the remaining areas were consistent with the pattern observed internationally, but they were all below the TALIS averages.

Interestingly, feedback that focuses on issues pertaining to inclusive education (teaching students with special needs or, in particular, teaching in multicultural settings) occurs less frequently. Further analysis would be required to evaluate whether this pattern is related to the differences in the composition of classes teachers teach (for example, it occurs less frequently when classes have fewer students with special needs), or whether perhaps principals themselves feel less confident in their ability to provide informative feedback in these areas.

FIGURE 5.3 Percentage of junior high school teachers in Alberta who report the feedback they received emphasized the following issues with a moderate or high importance



Source: OECD TALIS 2013 Database

5.2 Teachers' views on formal appraisal and feedback in their school

Most teachers in Alberta agree that teacher appraisal and feedback are designed to improve teaching, but a significant proportion do not agree that appraisal has the desired impact

TALIS 2013 asked teachers to comment about teacher appraisal and feedback in their school more generally, i.e., not just in the context of what they personally receive, but how feedback is provided and used in their schools. The appraisal and feedback section in the teachers' questionnaire pertained to both the more formal approaches (e.g., as part of a formal performance management system, involving set procedures and criteria) and more informal approaches (e.g., through informal discussions).

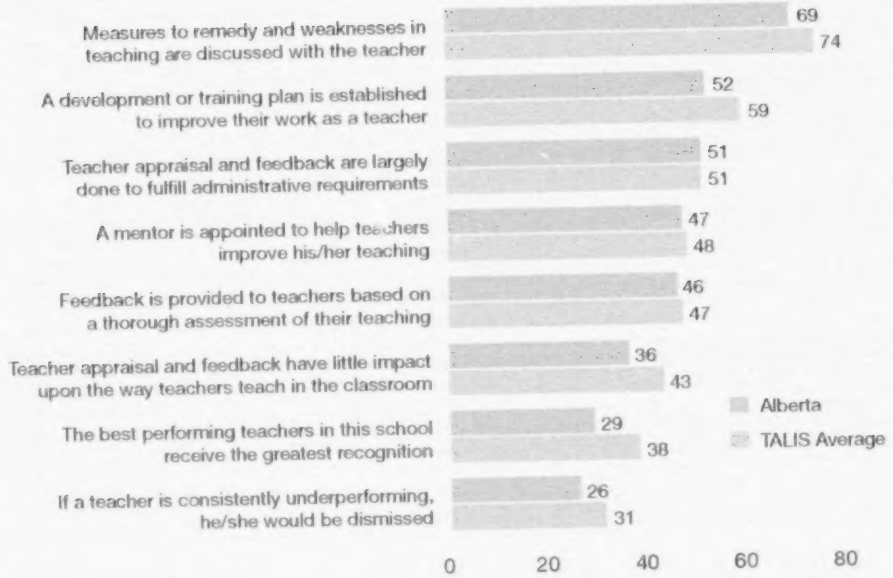
Figure 5.4 shows the combined proportions of teachers who agreed or strongly agreed with each individual statement. The majority of teachers in Alberta (69%) agree that appraisal and feedback lead to a discussion of measures to remedy any weaknesses in their teaching. Slightly over half (52%) also agree that a development or training plan is established for them to improve their work as a teacher as a result of appraisal and feedback. These responses are consistent with the responses provided by principals (discussed later) that indicated that teacher appraisal has a strong developmental focus.

More than one third (36%) of teachers in Alberta reported that the teacher appraisal and feedback system in their school has little impact on classroom teaching. Thus, even though both teachers and school principals indicate that teacher appraisal is done primarily to improve teaching, a significant proportion of teachers do not agree that it is having the desired impact.

A majority of teachers also perceive appraisal and feedback as not leading to any positive or negative consequences. Less than 30% of teachers reported that the best-performing teachers in their schools receive the greatest recognition (e.g., rewards, additional training or responsibilities), or that a teacher would be dismissed for consistently underperforming.

Responses provided by teachers in selected TALIS countries on some of the statements about appraisal and feedback (Table 5.2) show that Alberta teachers' perceptions about feedback and appraisal are similar to their international colleagues. In Finland, for example, half of the teachers believe that teacher appraisal and feedback have very little impact on their teaching; 62% (11 percentage points more than Alberta) of them agree that appraisal and feedback are done largely to fulfil administrative requirements; and only 16% (10 percentage points less than in Alberta) agree that a teacher would be dismissed if she or he was consistently underperforming. Singapore has a relatively higher proportion of teachers who agree that the best teachers receive greater recognition (71%) and a teacher would be dismissed if they are consistently underperforming (46%). But also in Singapore a higher proportion than in Alberta (39%) believe that teacher appraisal and feedback have very little impact on teaching. More than half (53%) also agree that teacher appraisal and feedback are done largely to fulfil administrative requirements.

FIGURE 5.4 Percentage of junior high school teachers in Alberta who agree or strongly agree with the following statements about teacher appraisal and feedback in their school



Source: OECD TALIS 2013 Database

TABLE 5.2 Percentage of lower secondary education teachers who agree or strongly agree with the following statements about teacher appraisal and feedback systems in their school

	The best performing teachers in this school receive the greatest recognition		Teacher appraisal and feedback have little impact upon the way teachers teach in the classroom		Teacher appraisal and feedback are largely done to fulfil administrative requirements		If a teacher is consistently underperforming, he/she would be dismissed	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**29**	**(1.7)**	**36**	**(1.3)**	**51**	**(1.8)**	**26**	**(1.3)**
Australia	31	(2.0)	43	(1.2)	62	(1.6)	24	(1.4)
Finland	25	(1.3)	50	(1.0)	62	(1.3)	16	(1.0)
Japan	37	(1.1)	32	(1.0)	47	(1.1)	14	(0.9)
Korea	51	(1.2)	41	(1.0)	60	(1.2)	19	(1.0)
Singapore	71	(0.9)	39	(1.0)	53	(0.9)	46	(0.9)
England (UK)	40	(1.6)	34	(1.6)	51	(1.7)	43	(1.5)
Flanders (Belgium)	15	(0.7)	41	(1.1)	51	(1.6)	33	(1.4)
TALIS Average	**38**	**(0.2)**	**43**	**(0.2)**	**51**	**(0.2)**	**31**	**(0.2)**

Source: OECD TALIS 2013 Database

Positive feedback is more likely to provide a "morale boost" than it is to result in recognition or rewards such as career advancement, bonuses or salary increases

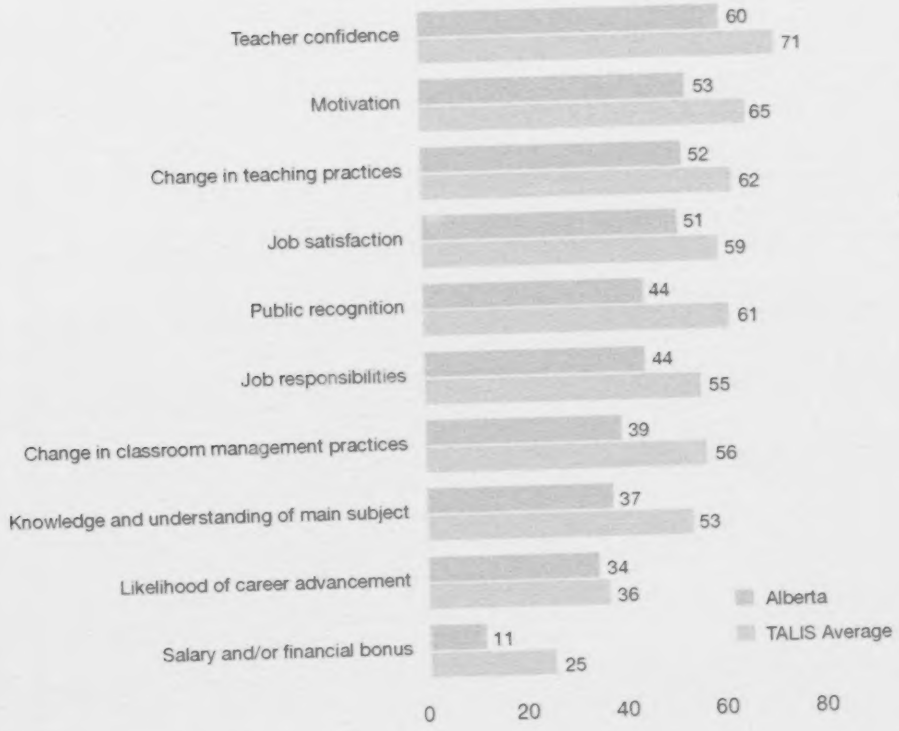
The previous section described how teachers view the feedback and appraisal system in their school in general. This section will illustrate what teachers think about feedback that they personally receive. Figure 5.5 summarizes the responses provided by teachers on the positive changes resulting from feedback on their own work.

Overall, teachers in Alberta are less likely than their international colleagues to report positive effects from the feedback they receive. For each of the areas for which the impact of feedback was assessed, the proportion of Alberta teachers who reported positive impacts was smaller than the TALIS average.

Sixty per cent of teachers indicated that the feedback they receive has at least a moderate positive impact on their confidence. Slightly over half of the teachers (51% to 53%) also indicated that feedback positively affects motivation, job satisfaction and change in teaching practices. All the remaining areas asked in the questionnaire showed moderate to large impacts for only a minority (11% to 44%) of the teachers.

These results indicate that feedback provided either through formal appraisal or through informal mechanisms could increase the confidence, motivation and practices of teachers in junior high schools in Alberta. However, it is less likely to result in an increase in their knowledge and understanding of the subjects they teach, nor will it likely result in positive changes in classroom management practices. Feedback is also less likely to result in any reward for teachers such as increased job responsibilities or career advancement, public recognition or salary increases and bonuses. These responses are consistent with responses provided by principals on the outcomes of formal teacher appraisal discussed in the next section.

FIGURE 5.5 Percentage of junior high teachers who report a moderate or large positive change in the following areas after they received feedback on their work at their school



Source: OECD TALIS 2013 Database

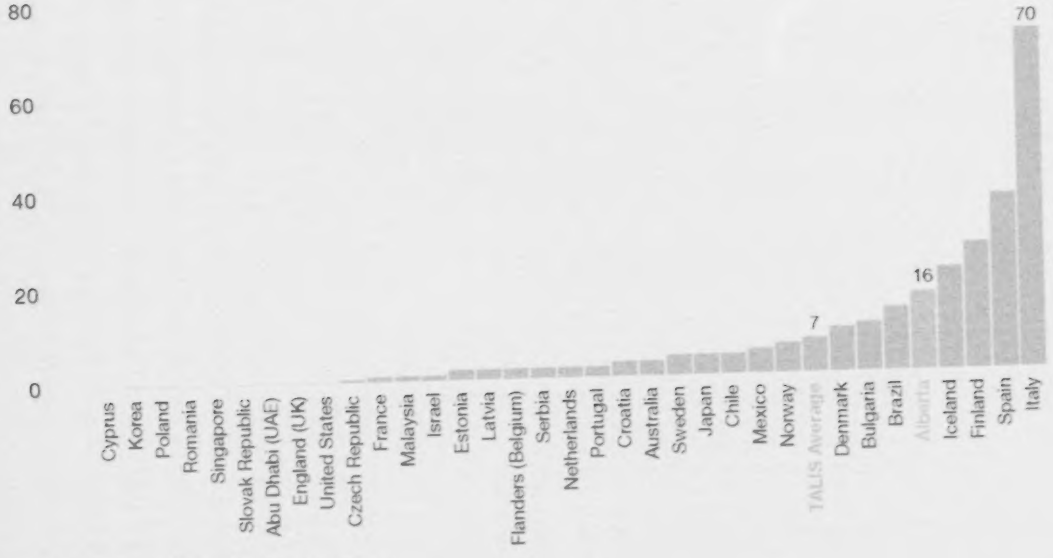
5.3 Formal teacher appraisal

Formal teacher appraisal occurs in fewer schools in Alberta than in most TALIS-participating countries

This section deals with formal teacher appraisal as part of a formalized performance management system, which often involves set procedures and criteria, rather than a more informal approach. The data in this section was mainly obtained from principals' responses to specific questions about formal teacher appraisal. In addition, two Alberta-specific questions were asked on the teachers' questionnaire about formal appraisal from the teachers' perspective.

Figure 5.6 shows the percentage of teachers whose principals report that teachers are never appraised. The data show that there are only a few participating TALIS countries where formal appraisal is less emphasized than in Alberta. At the same time, there are countries like Singapore where formal appraisal is a standard practice in all schools. In Alberta, 16% of junior high school teachers teach in schools where the principal indicated that there is no formal appraisal of teachers. This is relatively high compared to other TALIS-participating countries. Only four other TALIS countries (Iceland, Finland, Spain and Italy) reported higher percentages of teachers who do not undergo formal appraisal than Alberta. The degree to which formal teacher appraisal is not happening in Alberta schools is also more than double the TALIS average. Across all TALIS countries, only about 7% of teachers teach in schools where teachers are not formally appraised.

FIGURE 5.6 Percentage of lower secondary education teachers whose school principals report that their teachers were never appraised



Source: OECD TALIS 2013 Database

When formal appraisal is conducted, it is most likely to involve the school principal

Table 5.3 shows the percentage of teachers in selected TALIS countries whose principals reported that teachers are never appraised by the school principal or other individuals or groups. In Alberta, only 18% of junior high school teachers have never been formally appraised by the school principal, which means that about 82% of teachers in Alberta teach in schools where teachers are formally appraised by the school principal. Similarly, in countries such as Singapore and Korea almost none of the teachers (1% to 2%) teach in schools where teachers are never formally appraised by the school principal. About half (49%) of the teachers in Alberta also teach in schools where other members of the school management team are never involved in teacher formal appraisal. The majority (74% to 81%) teach in schools where formal appraisal never involves other teachers who are not part of the school management team, assigned mentors or someone from outside the school (Figure 5.7). In some countries (Japan, Korea and Singapore, but also UK) the use of external individuals to perform formal teacher appraisal is significantly more widespread than in Alberta. In addition, formal appraisal performed by other teachers, which is fairly rare in Alberta, appears to be a norm in Korea.

TABLE 5.3 Percentage of teachers in lower secondary education whose school principal report that their teachers were never formally appraised

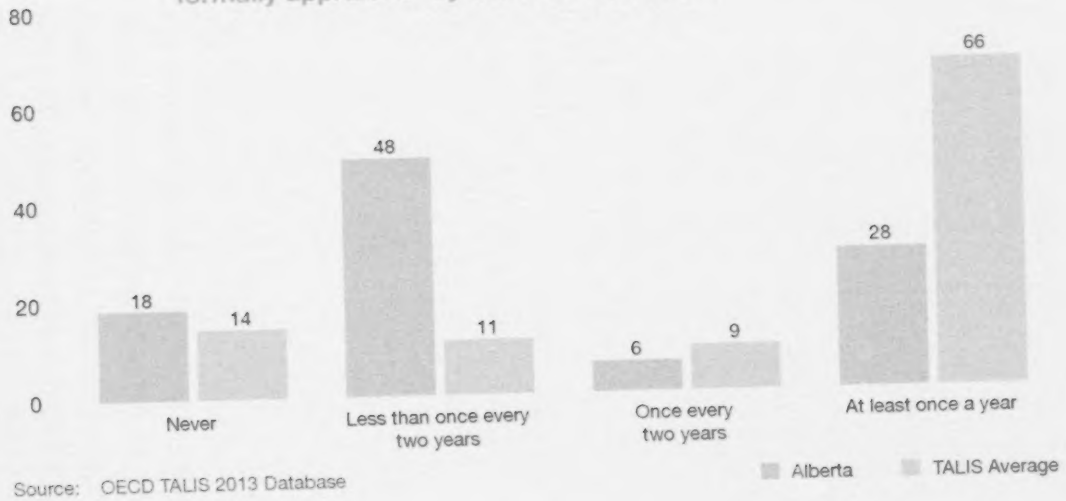
	Never formally appraised by the school principal		Never formally appraised by other members of the school management team		Never formally appraised by the teacher's mentor		Never formally appraised by other teachers		Never formally appraised by external individuals or bodies		Generally never formally appraised	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**18**	**(3.9)**	**49**	**(4.8)**	**77**	**(3.6)**	**74**	**(3.7)**	**81**	**(3.2)**	**16**	**(3.7)**
Australia	28	(5.8)	7	(2.3)	26	(4.4)	50	(6.4)	78	(4.4)	3	(1.4)
Finland	28	(3.9)	86	(3.2)	92	(2.5)	92	(2.5)	78	(4.0)	26	(4.2)
Japan	7	(1.7)	28	(3.3)	44	(4.1)	41	(3.7)	32	(3.2)	4	(1.1)
Korea	2	(1.3)	17	(3.0)	36	(4.0)	6	(2.0)	43	(4.2)	0	(0.0)
Singapore	1	(0.0)	0	(0.0)	46	(0.3)	73	(0.2)	53	(0.2)	0	(0.0)
England (UK)	17	(4.0)	3	(1.4)	22	(4.2)	11	(2.4)	42	(5.1)	0	(0.0)
Flanders (Belgium)	12	(3.1)	44	(4.5)	41	(3.7)	61	(4.2)	39	(4.0)	2	(1.3)
TALIS Average	**14**	**0.4**	**30**	**(0.5)**	**52**	**(0.6)**	**52**	**(0.7)**	**37**	**(0.6)**	**7**	**(0.3)**

Source: OECD TALIS 2013 Database

Formal teacher appraisal in Alberta schools is infrequent, mostly likely to occur less than once every two years

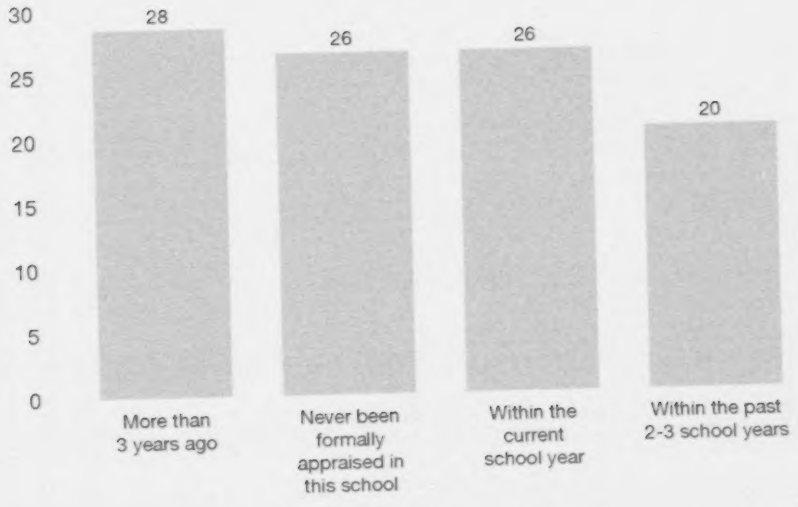
Regular appraisal provides teachers with timely feedback on their teaching practices. TALIS data was examined to determine how frequent formal teacher appraisals are done in Alberta. The data was determined by the analysis of principals' responses to the question on how often teachers are appraised in their school by various individuals or groups. In addition, an Alberta-specific question was asked to teachers to indicate when was the last time they were formally appraised. The results obtained from principals and teachers are presented in Figures 5.7 and 5.8.

FIGURE 5.7 Percentage of junior high school teachers in Alberta whose principals report that teachers are formally appraised "once a year," "once every two years," "less than once every two years" or "never formally appraised" by the school principal



Source: OECD TALIS 2013 Database

FIGURE 5.8 Percentage of junior high teachers in Alberta who report that the last time they were formally appraised was "within the current school year," "within the past two years," "more than three years ago" or "never"[1]



1 This was an Alberta-specific TALIS question so there are no TALIS averages to compare with.

Source: OECD TALIS 2013 Database

Before any meaningful comparisons are made between the responses provided by teachers and those provided by principals, the reader should be aware that the questions for principals referred to formal appraisal in general in their school while teachers were asked about formal appraisal that they have personally experienced.

Despite the differences in the nature of the questions, three interesting observations from the two sources of data are worth noting:

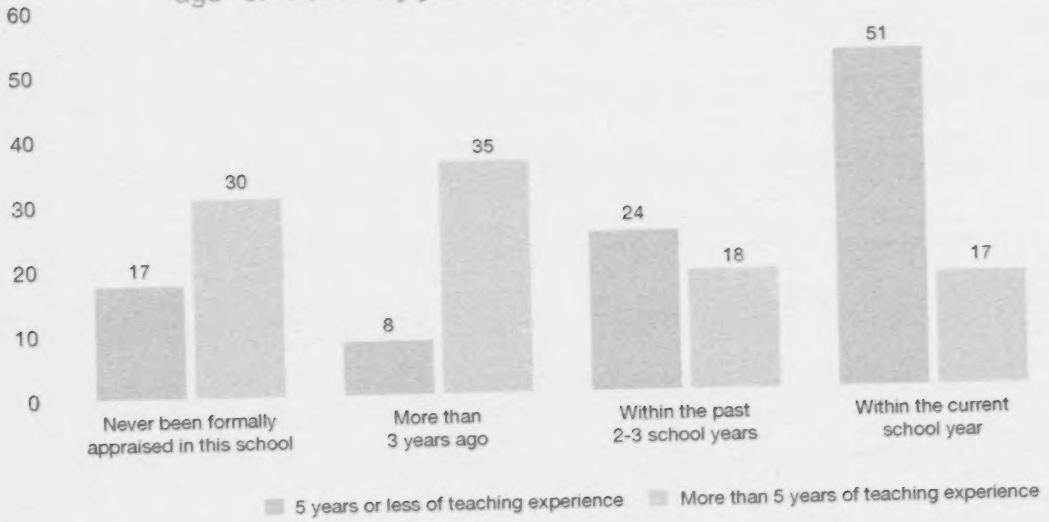
1. Formal appraisal may be occurring in a school, but it may be very infrequent or it may target only a few teachers at a time. This finding is evidenced by the greater proportion of teachers who have never been formally appraised in their current school (26%) compared to the proportion of teachers whose principals' reported that they have never formally appraised any teachers in their school (18%).

2. If formal teacher appraisal happens at a school, it is most likely to occur less than once every two years. Almost half (48%) of teachers teach in schools where the principal indicated that formal appraisal by the school principal occurs less than once every two years. The same proportion of teachers (48%) reported that they were formally appraised within the past two to three years, or more than three years ago.

3. Less than one third of teachers in Alberta have the opportunity for annual formal appraisal: 26% of teachers indicated that they were formally appraised within the current school year, and a fairly similar proportion (28%) teach in schools where the principal conducts formal appraisal of teachers at least once a year.

The data from teachers' responses was analysed further to explore any differences between more experienced and less experienced teachers in the frequency of formal appraisal. The results are presented in Figure 5.9.

FIGURE 5.9 Percentage of junior high teachers in Alberta who report that the last time they were formally appraised was "within the current school year," "within the past two years," "more than three years ago" or "never" by years of teaching experience



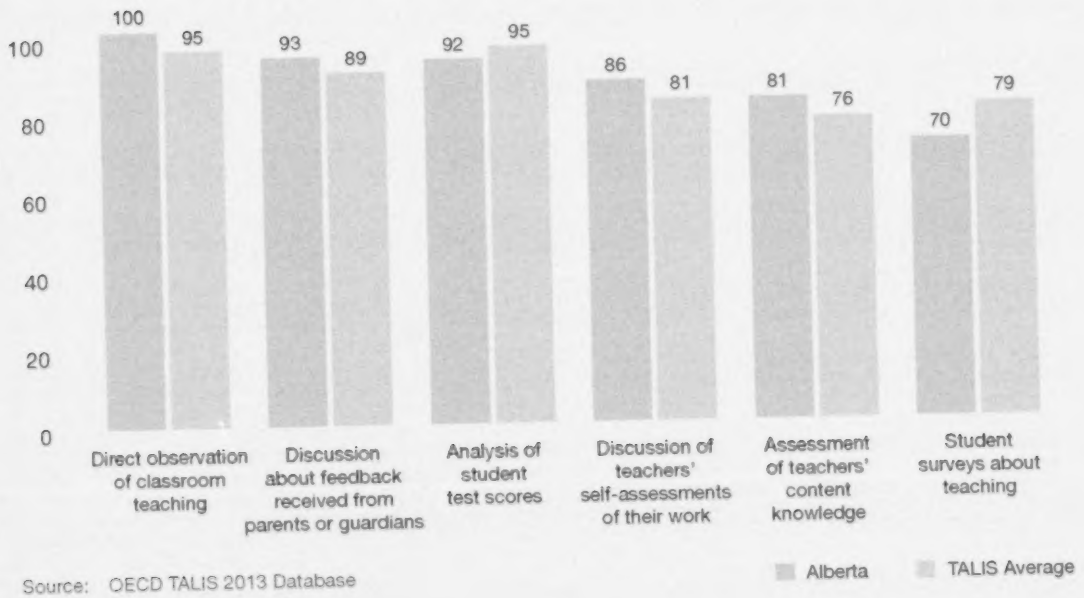
Source: OECD TALIS 2013 Database

The results show that formal appraisal occurs more frequently for less experienced teachers than for more experienced teachers. About half (51%) of teachers in Alberta junior high schools with five years of teaching experience or less reported that they were appraised within the current school year compared to only 17% of teachers who have taught for more than five years. More than one third (35%) of experienced teachers indicated that they were formally appraised more than three years ago and about one third (30%) of them have never received formal appraisal in their current school. This is quite high compared to only 17% of the less experienced teachers who have never been formally appraised in their current school.

Formal teacher appraisal by school principals is done on the basis of multiple sources of the data and is most likely to include direct observation of classroom teaching

School principals who indicated that there is formal appraisal in their schools were asked to identify the methods or sources of data they use in the process. The results obtained are shown in Figure 5.10. It is important to keep in mind that these data do not mean that each of the sources is used every time an appraisal is performed. Rather, the data presented below are more indicative of the types of sources of information that are never used in teacher appraisal. For example, one might conclude that 30% of teachers in Alberta teach in schools in which formal appraisal does not take into account information collected from student surveys (possibly because such surveys are not conducted, or because even if the data are collected, it is not deemed relevant for formal appraisal purposes). Similarly, one would need to assume that no teacher appraisal in Alberta is done without classroom observation of a teacher's work.

FIGURE 5.10 Percentage of teachers in lower secondary education whose principals report that teachers are formally appraised with the following methods

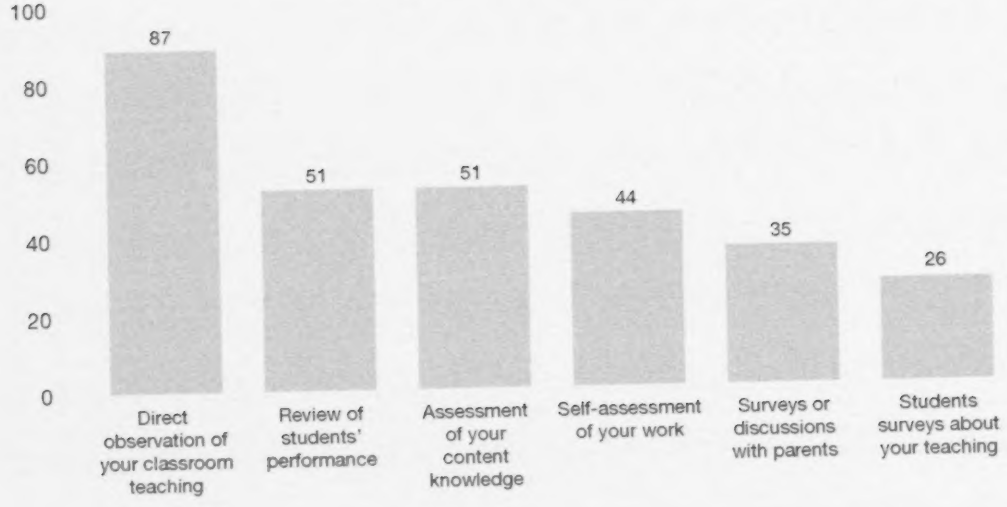


Source: OECD TALIS 2013 Database

Direct observation of classroom teaching is used in all junior high schools where there is formal appraisal. Analysis of student test scores, and discussion about feedback received from parents or guardians are also commonly practiced in most of the schools where formal appraisal occurs. Formal appraisal on the basis of student surveys about teaching is the least emphasized approach in Alberta junior high schools. Even though 70% of teachers teach in schools where formal appraisal is based on student surveys about teaching, this percentage is relatively low compared to other methods and it is also lower than the TALIS average of 79%.

Figure 5.11 shows the responses provided by teachers to an Alberta-specific question on the aspects considered in their formal appraisal. Overall, teachers agree with school principals that direct observation of classroom teaching is the most emphasized and students' surveys are the least emphasized in formal teacher appraisal in Alberta. The majority of teachers (87%) indicated that their formal appraisal included direct classroom observation of their teaching. Just over a quarter (26%) reported that their formal appraisal included students' surveys about their teaching. However, the data also suggest that direct observation of classrooms is the only method that is consistently used by principals to formally appraise teachers but even that is not used in all cases. All principals indicated that they have used direct observation to formally appraise teachers, but only 87% of teachers who have been formally appraised said that their appraisal involved direct classroom observation. This means that 13% of the teachers were most likely formally appraised by other means that did not include direct classroom observation. Only about half or less (26% to 51%) of the teachers who have been formally appraised indicated that any of the remaining aspects (apart from direct observation of classrooms) were considered in their formal appraisal.

FIGURE 5.11 Percentage junior high school teachers in Alberta who indicated the following aspects were considered in their formal appraisal[1]



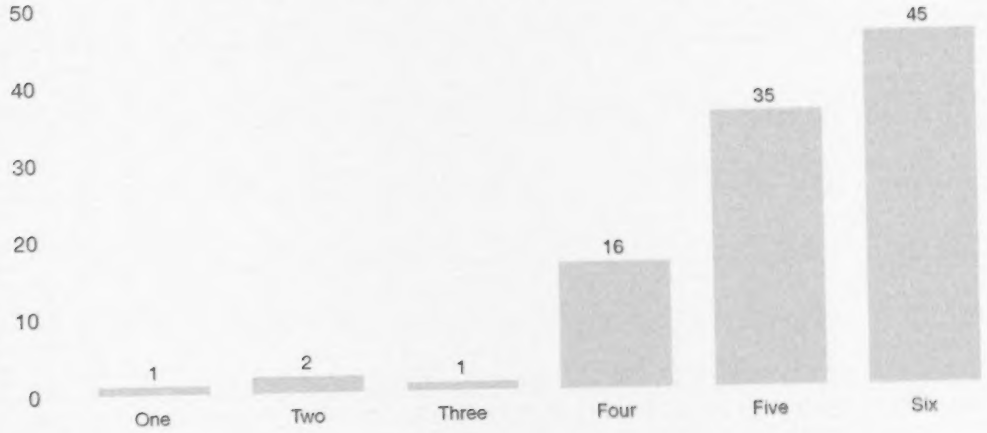
1 This was an Alberta-specific question so there are no TALIS averages available to compare with.

Source: OECD TALIS 2013 Database

Research suggests that an effective way of conducting teacher appraisal is to use multiple sources of data. For example, Jensen and Reichl recommend a balanced scorecard approach to teacher appraisal that involves student assessments and at least three other different methods.[5] Further analysis of TALIS data was conducted to determine the extent to which principals use multiple methods, or sources of data, to formally appraise teachers. The results are presented in Figure 5.12. The data show that even though the principal is mostly the person doing the formal appraisal (Figure 5.7) he or she is more likely to employ different methods or sources of data in the process.

5 Jensen, B., and J. Reichl. 2011. *Better teacher appraisal and feedback: Improving performance.* Grattan Institute, Melbourne.

FIGURE 5.12 Percentage of teachers in junior high schools in Alberta where formal appraisal occurs, whose principals report using one, two, three, four, five different methods[1] for formal teacher appraisal



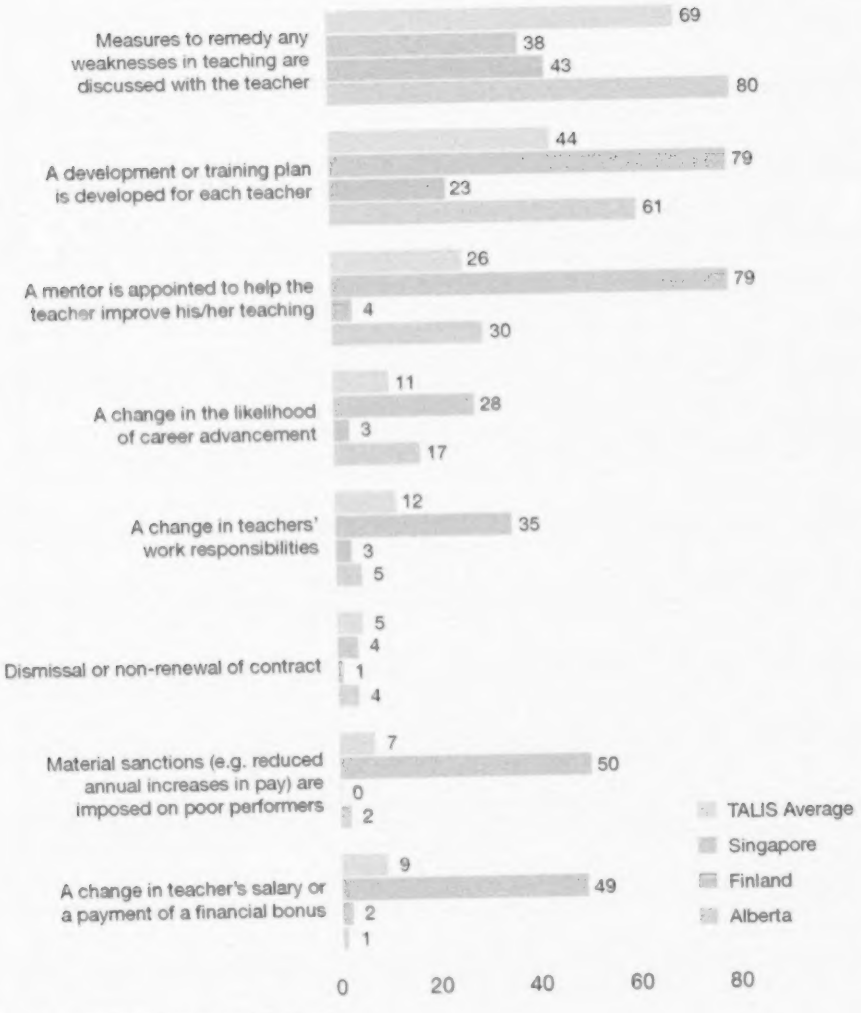
1 The methods asked in the survey are the following: direct observation of classroom teaching; student surveys about teaching; assessment of teachers' content knowledge; analysis of students' test scores; discussion of teachers' self-assessment of their work; and discussion about feedback from parents or guardians.

Source: OECD TALIS 2013 Database

Formal teacher appraisal in Alberta is not used to reward or punish teachers, but rather to help them improve their teaching

Responses provided by principals on the outcomes of formal teacher appraisal are presented in Figure 5.13 for Alberta and selected TALIS countries. The majority of teachers in TALIS countries teach in schools where formal appraisal typically leads to the discussion with the teacher of measures to remedy any weaknesses in teaching and the development of a training or development plan for each teacher. Formal appraisal is less likely to result in the appointment of a mentor to help a teacher improve his/her teaching, or in the result of dismissal or non-renewal of a teacher's contract. Formal appraisal is also less likely to lead to a change in a teacher's work responsibilities, or a change in the likelihood of career advancement. The results also indicate that formal appraisal in junior high schools in Alberta seldom results in the imposition of material sanctions (e.g., reduced annual increases in pay) on poor performers or a change in teachers' salary or a payment of a financial bonus.

FIGURE 5.13 Percentage of teachers in lower secondary schools who work in schools where principals report that the following outcomes occurred "always" or "most of the time" after formal teacher appraisal



Source: OECD TALIS 2013 Database

In Alberta, 80% of junior high teachers teach in schools where formal appraisal always, or most of the time, results in the discussion of measures to remedy weaknesses in teaching. This proportion is above the TALIS average and almost twice as high compared to countries like Singapore and Finland. For almost all (99%) junior high school teachers who teach in schools where formal appraisal occurs, formal appraisal never leads to a change in teachers' salary or payment of bonuses. A similar situation is found in Finland. However, in Singapore about half of the teachers who teach in schools where formal appraisal occurs could face material sanctions such as change in salary or bonuses as a result of poor performance. Singapore does not only punish or reward teachers based on performance, but they also have measures to help teachers to improve their teaching. Teachers in Singapore are more likely than teachers in Alberta to have a training plan developed for them (79% compared to 61% in Alberta); mentors appointed to help them improve (79% compared to 30% in Alberta); or a change in their work responsibilities (35% compared to 5% in Alberta) (Figure 5.13).

5.4 Summary

Teachers in Alberta receive feedback from formal appraisal and other informal mechanisms. The majority of teachers receive feedback, but there are a few teachers who have never received any feedback in the school where they currently teach. Overall, teachers in Alberta are more likely to receive feedback from their school principal than their international counterparts. Teachers in Alberta usually receive feedback after an observation in their classroom and/or analysis of their students' test scores. Teachers in Alberta are less likely than their international counterparts to receive feedback from student surveys or an assessment of their content knowledge. More emphasis is placed on student performance and assessment practices when teachers in Alberta receive feedback. Generally, feedback given to teachers in Alberta emphasizes similar things as what is observed in many other TALIS countries.

Most teachers believe that formal appraisal and feedback are meant to help them improve their teaching, but many of them don't think it is having the desired impact. Feedback may boost teachers' confidence, motivation and job satisfaction, but it is less likely to help teachers to change classroom management practices, help them with their career advancement or lead to any recognition or rewards or consequences. Teachers generally are more positive about the impact of feedback on themselves than on other teachers in their school.

Formal teacher appraisal that occurs when a teacher's work is reviewed by the principal, an external inspector or by his or her colleagues as part of a formalized performance management system occurs less frequently in Alberta schools compared to other TALIS-participating countries. When it happens, it is most likely to involve the school principal or members of the school management team than by external individual or bodies. Formal teacher appraisal is most likely to occur less than once every two years for most teachers and occurs more frequently for less experienced teachers than experienced teachers. Multiple sources of data, usually including direct classroom observation, are used as the basis for formal teacher appraisal in Alberta.

Formal teacher appraisal in Alberta does not result in any consequences or recognition apart from a discussion of measures with teachers to correct any weakness in teaching. The situation appears to be similar in Finland, a high performer on international student assessments. A country such as Singapore, another high-performing country, presents a more balanced approach of reward, consequences and improvement in teaching through formal appraisal.

CHAPTER 6

Teaching Practices, Teacher Beliefs and Classroom Environments

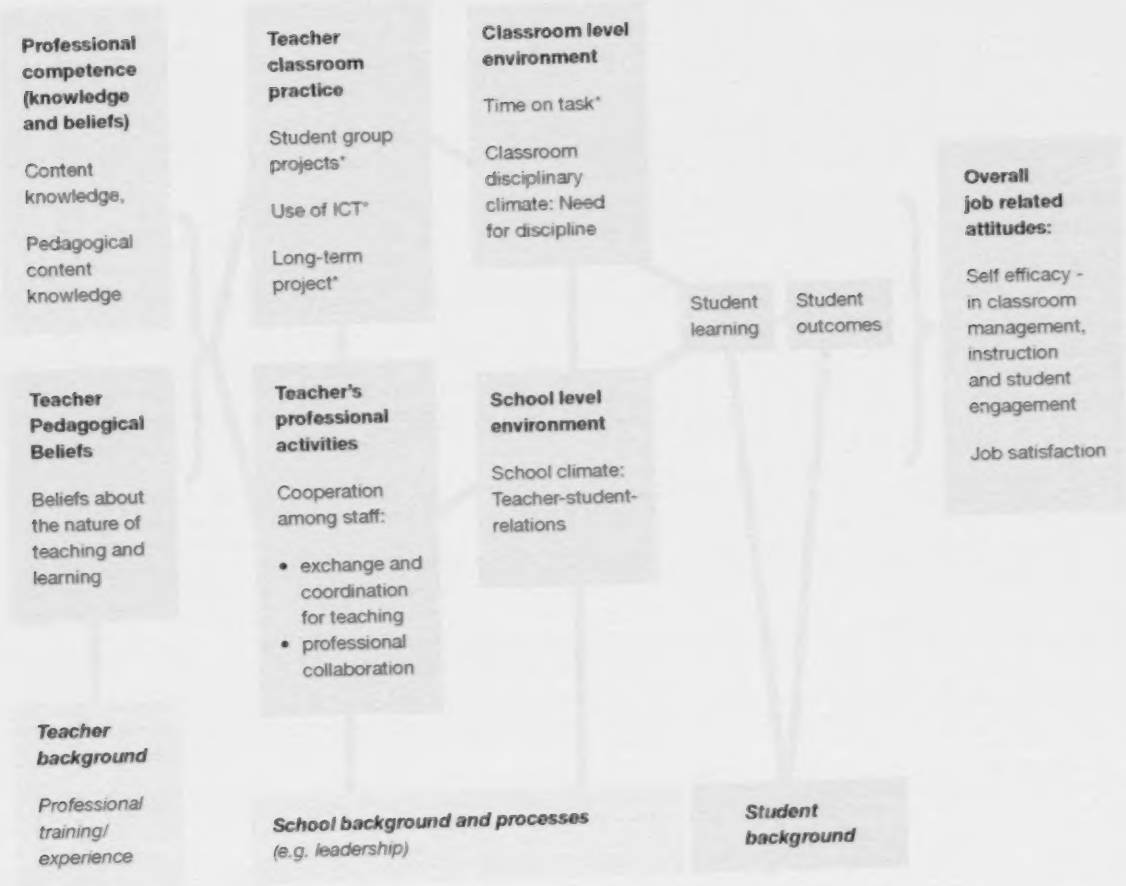
Teaching Practices, Teacher Beliefs and Classroom Environments

This chapter examines profiles of teaching practices, teacher beliefs and classroom environments. Specifically, it reports on analyses of teaching practices used by TALIS participating teachers and their beliefs on the nature of teaching and learning. It also looks at how teachers spend their time and the relationship between teachers' working time and the school climate.

6.1 Theoretical background and analytical framework

Figure 6.1 provides a framework showing the relationship between teaching practices, teacher beliefs, school and classroom-level environments, and impacts on student learning and teachers' job-related attitudes. Note that there are no directions of influence in the diagram—the figure only shows that there is a relationship between two variables, not which one is the cause and which the effect. For example, we can see that there is a relationship between teacher beliefs and teacher classroom practice, but not whether the beliefs influence classroom practice, or vice versa. Although TALIS is not designed to explore student achievement and motivation to learn, the framework provides an overview of how teacher-related factors can enhance student learning and motivation. One key goal of TALIS is to examine how teaching practices reported by teachers relate to their beliefs and the environment in which they work.

FIGURE 6.1 Theoretical framework for the analysis of teaching practices and beliefs[1]



Source: This figure was adapted from OECD, 2009[1], chapter 4.

1 Variables that are covered by the TALIS survey are highlighted in green; single-item measures are indicated with an asterisk (*).

1 OECD (2009), *Creating Effective Teaching and Learning Environments: First Results from TALIS*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264068780-en.

6.2 Teacher beliefs

The majority of junior high school teachers in Alberta agree with constructivist beliefs about how students learn and that the teachers' role is to facilitate inquiry in students

To assess the kinds of beliefs teachers hold about how student learn, TALIS 2013 asked teachers both about the ways they believe students learn best, and about how they, as teachers, might facilitate this learning. Teachers responded by indicating how strongly they agreed with the following four statements:

- My role as a teacher is to facilitate students' own inquiry.
- Students learn best by finding solutions to problems on their own.
- Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved.
- Thinking and reasoning processes are more important than specific curriculum content.

Teacher responses, which were on a four-point scale ranging from "strongly disagree" to "strongly agree," can indicate if their beliefs are consistent with constructivist teaching and learning. Table 6.1 reports the percentages of teachers who agree with each statement about how students learn and the role of the teacher in that process.

TABLE 6.1 Percentage of teachers in lower secondary education who agree or strongly agree with the following statements

	My role as a teacher is to facilitate students' own inquiry		Students learn best by finding solutions to problems on their own		Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved		Thinking and reasoning processes are more important than specific curriculum content	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**96**	**(0.7)**	**82**	**(1.2)**	**94**	**(0.6)**	**87**	**(1.1)**
Australia	93	(0.5)	71	(1.2)	89	(1.0)	80	(1.2)
Finland	97	(0.3)	82	(0.7)	94	(0.4)	91	(0.6)
Japan	94	(0.4)	94	(0.4)	93	(0.5)	70	(0.9)
Korea	97	(0.3)	95	(0.4)	97	(0.3)	86	(0.6)
Singapore	95	(0.4)	89	(0.7)	97	(0.3)	95	(0.4)
England (UK)	96	(0.4)	86	(0.8)	96	(0.6)	74	(1.0)
Flanders (Belgium)	99	(0.2)	84	(0.9)	93	(0.5)	71	(0.9)
TALIS Average	**94**	**(0.1)**	**83**	**(0.1)**	**93**	**(0.1)**	**84**	**(0.1)**

Source: OECD TALIS 2013 Database

Overall, there is strong agreement among teachers in TALIS 2013 countries that their role is to facilitate inquiry in the student (94% on average). Also, a majority of teachers believe that students should be allowed to think of solutions themselves before the teachers show them (93%). Alberta's results are very close to the TALIS averages and similar to most of the selected countries. More than 80% of junior high school teachers agree with all the constructivist beliefs about how students learn and the role of teachers in the process.

6.3 Teacher Practices

Alberta teachers use teaching practices that enable students to play a central role in the learning process

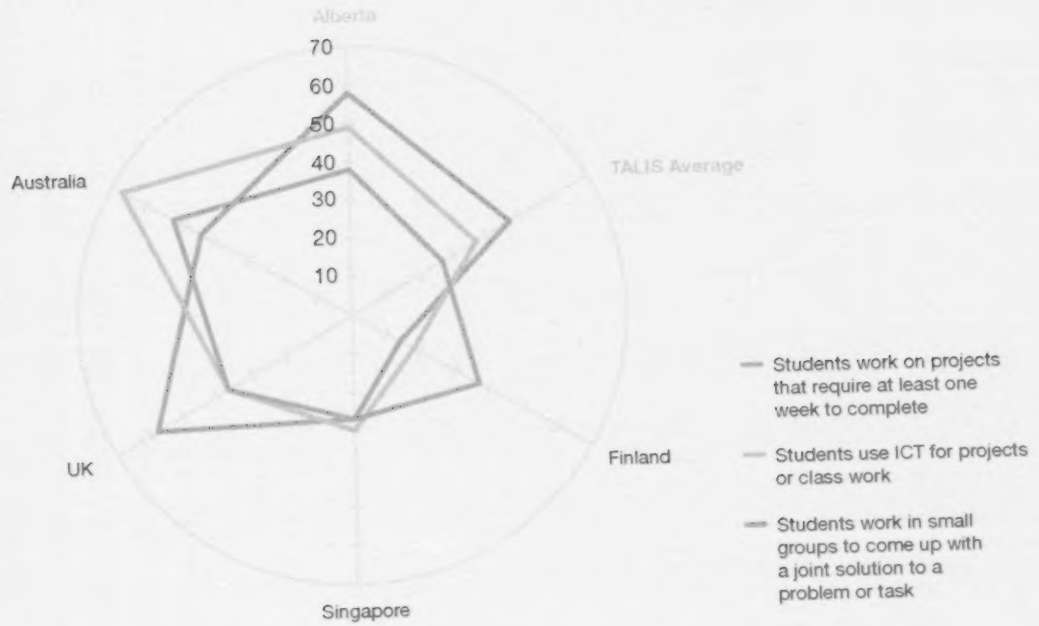
Research indicates that certain teaching practices or strategies enhance effective classroom learning. These practices include promoting cooperative learning activities and the use of questioning.[2] These types of practices and strategies are called "active teaching," and contrast with strategies based on lecturing and very little student involvement (passive teaching/learning). Active teaching is designed to take students out of their books, sometimes out of their schools, and sometimes out their familiar ways of thinking. It tries to make students active participants in their own learning,[3,4] and a number of studies point to the positive effects of active teaching strategies.[5,6] The key distinction between active and passive teaching strategies is the difference in the degree to which they attempt to engage students in the process of learning.

- TALIS focused on three teaching practices that can be viewed as active teaching:
- students work on projects that require at least one week to complete
- students use information and communication technology (ICT) for projects or class work
- students work in small groups to come up with a joint solution to a problem or task

The education literature referenced above supports the selection of these three practices as examples of active teaching, but that does not mean they are always effective for learning. Like any teaching strategy, their effectiveness largely depends on how they are implemented in the classroom. These practices promote skills that students should possess for academic success and that may be highly sought after in post-secondary education and the workplace. Figure 6.2 shows the results obtained on the three active teaching practices for Alberta and four selected TALIS countries.

2 Marzano, R.J., D.J. Pickering and J.E. Pollock, 2001. *Classroom Instruction that works*. Alexandria, VA: ASCD.
3 Silberman, M., 1996. *Active learning: 101 Strategies to Teach any Subject*. Needham Heights, MA: Allyn & Bacon.
4 Buehl, D., 2001. *Classroom Strategies for Interactive Learning*, 2nd ed. Newark, DE: International Reading Association.
5 Dunlosky, J., K.A. Rawson, E.J. Marsh, M.J. Nathan and D.T. Willingham, 2013. Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest* 14, 4–58.
6 Johnson, D.W., and R.T. Johnson, 2009. An educational psychology success story: social interdependence theory and cooperative learning. *Educational Researcher* 38(5), 365–379.

FIGURE 6.2 Percentage of teachers in lower secondary education in Alberta and selected TALIS countries who use active teaching practices "frequently" or "in all, or nearly all lessons"



Source: OECD TALIS 2013 Database

The proportion of teachers who frequently use these active teaching practices in Alberta is higher than the TALIS average for each of the three practices. In particular, teachers in Alberta are approximately three times more likely than their Finnish colleagues to have students use ICT for project or class work, or to have students work in small groups. The gap is not as large, but still quite significant, when teachers in Alberta are compared to teachers in Singapore.

Across all TALIS countries, less than half of teachers are using these strategies frequently in their lessons, which means that the use of passive teaching strategies is still widespread.

If Programme for International Student Assessment (PISA) results are indicative of student performance, it would be hard to argue that active teaching practices are required for better student performance. Singapore and Finland have top-performing students but are both below the TALIS average for the use of these practices; Australia's students perform only slightly above the OECD average in mathematics, but its teachers are most likely to use active teaching/learning strategies.

Teachers in Alberta are less likely to use standardized tests in their classrooms than their international counterparts

Well-designed classroom assessment and grading practices can provide the kind of specific, personalized and timely information needed to guide both learning and teaching.[7] Teachers were asked how often they use different types of student assessment practices in a specific target class. Table 6.2 shows the proportions of teachers who report using different student assessment practices in their classroom.

TABLE 6.2 Percentage of teachers in lower secondary education who report using the following methods of assessing student learning frequently or in nearly all lessons

	Develop and administer own assessment		Administer a standardized test		Individual students answer questions in front of the class		Provide written feedback on student work in addition to a mark, i.e., numeric score or letter grade		Let students evaluate their own progress		Observe students when working on particular tasks and provide immediate feedback	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**88**	**(1.1)**	**18**	**(1.3)**	**36**	**(1.6)**	**68**	**(1.3)**	**39**	**(1.7)**	**88**	**(0.9)**
Australia	72	(1.7)	32	(1.4)	48	(2.1)	75	(1.7)	32	(1.5)	90	(0.9)
Finland	66	(1.2)	28	(1.1)	11	(0.7)	25	(1.0)	27	(1.2)	76	(0.8)
Japan	29	(0.8)	33	(1.0)	53	(0.9)	23	(1.0)	27	(1.1)	43	(0.9)
Korea	31	(1.0)	51	(1.1)	27	(1.1)	25	(0.9)	21	(1.0)	46	(1.2)
Singapore	65	(1.0)	71	(0.9)	64	(1.0)	72	(0.9)	32	(0.9)	78	(0.8)
Alberta	88	(1.1)	18	(1.3)	36	(1.6)	68	(1.3)	39	(1.7)	88	(0.9)
England (UK)	71	(1.2)	40	(1.2)	69	(1.3)	82	(1.1)	69	(1.3)	89	(0.7)
Flanders (Belgium)	89	(0.7)	14	(0.9)	40	(1.1)	61	(1.2)	30	(1.2)	77	(1.1)
TALIS Average	**68**	**(0.2)**	**38**	**(0.2)**	**49**	**(0.2)**	**55**	**(0.2)**	**38**	**(0.2)**	**80**	**(0.2)**

Source: OECD TALIS 2013 Database

7 McTighe, J., and K. O'Connor, 2005. Seven Practices for Effective Learning. *Educational Leadership* 63(3), 10–17.

The results show that teachers in Alberta, as in many other countries, use a variety of assessment approaches and opportunities, including engaging students in their own assessment, observing students while they perform tasks, and providing written feedback on student work in addition to a mark. The majority of junior high school teachers in Alberta (88%; TALIS average 68%) indicate that they develop and administer their own assessment. Only 18% of teachers in Alberta (TALIS average 38%) administer standardized tests. Interestingly, teachers in Korea and Singapore, whose students are regularly strong PISA performers, are three to four times more likely than teachers in Alberta to use standardized tests in their classrooms. Moreover, teachers in Finland are also more likely than teachers in Alberta to use standardized tests in their classrooms.

Feedback on assessment is key to helping students understand both their strengths and the areas in which they can improve. The majority of teachers in Alberta (68%) indicate that they provide written feedback on student work in addition to a mark or a letter grade. This practice appears to be even more common in the UK (82%), Singapore (73%) and Australia (75%), but only one quarter or less of the teachers in Japan, Korea and Finland indicated that they provide written feedback on student work in addition to marks.

In some forms of assessment, teachers observe students while they perform specific tasks and provide feedback during the activity. In Alberta, 88% of junior high school teachers use this type of assessment and feedback, compared to 80% across TALIS countries. Teachers in Korea and Japan—two Asian countries among the top performers on PISA tests—do not appear to focus on this assessment practice, but another top performer on PISA tests, Singapore, does.

Another type of assessment that has been shown to raise students' achievement significantly is student self-assessment.[8,9,10] Teachers can facilitate this process of student self-evaluation by incorporating it into their regular classroom assessment practices. Across all TALIS countries, 38% teachers report that they let students evaluate their own progress. In Alberta, 39% of junior high school teachers engage in this practice. England (UK) appears to use student self-assessment more than other countries, as indicated by the relatively high proportion of teachers (69%) who allow students to evaluate their own progress.

6.4 Time on task

Alberta teachers work more hours and spend more time teaching than teachers in most TALIS countries

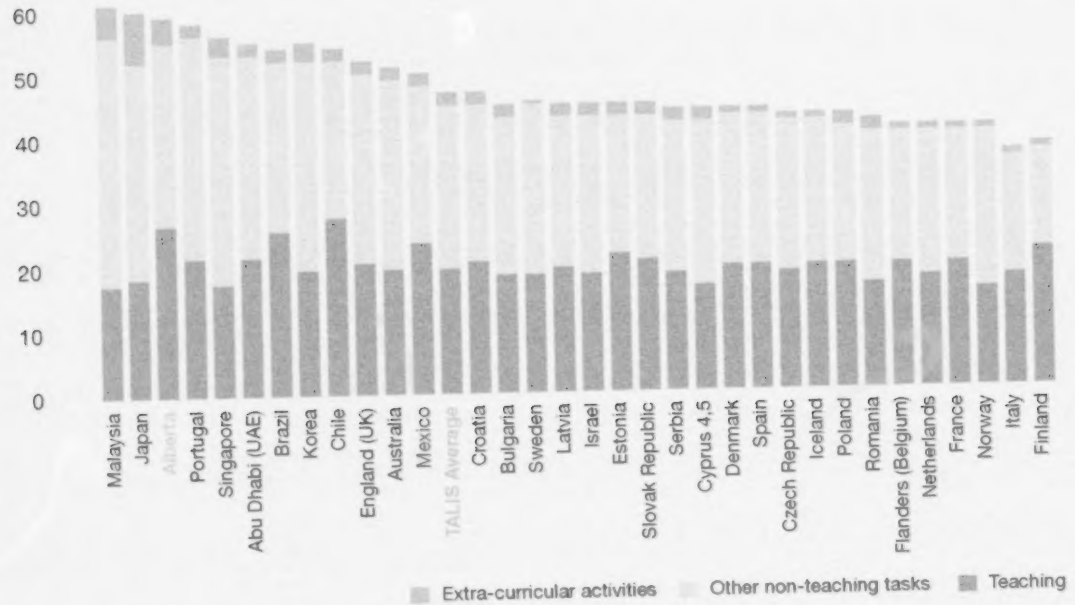
Surveyed teachers reported the number of hours they spend on teaching and non-teaching tasks (including extra-curricular activities) throughout the work week. The results presented in Figure 6.3 show that junior high school teachers in Alberta work approximately 58 hours per week, compared to the TALIS average of 47 hours. This workload places Alberta second among TALIS countries, tied with Japan and behind only Malaysia (60 hours).

8 Black, P., and D. William, 1998. Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan* 80(2), 139–148.

9 Chappuis, S., and R.J. Stiggins, 2002. Classroom assessment for learning. *Educational Leadership* 60(1), 40–43

10 Rolheiser, C. and Ross, J.A. (2001), "Student self-evaluation: what research says and what practice shows", in Small, R.D. and Thomas, A. (Eds), Plain Talk about Kids, Center for Development and Learning, Covington, LA, pp. 43-57.

FIGURE 6.3 Average number of 60-minute hours teachers report having spent on teaching and on non-teaching tasks during the most recent complete calendar week[1,2,3]



Source: OECD TALIS 2013 Database

1 A complete calendar week is one that was not shortened by breaks, public holidays, sick leave, etc.
2 Reported hours include tasks that took place during weekends, evenings or other off classroom hours.
3 This figure presents the averages from all the teachers surveyed, including part-time teachers.

When work hours are broken down by individual tasks, it shows that the amount of time teachers in Alberta spend on a variety of non-teaching tasks does not differ significantly from the TALIS average. The big difference is that teachers in Alberta, on average, teach about 36% more hours than teachers in TALIS countries. Alberta has the second-highest number of teaching hours (26 hours per week) behind Chile (27 hours per week) and far above the TALIS average (19 hours per week). Teachers in Finland, Japan, Korea and Singapore spend less than 20 hours a week on teaching. In fact, bringing down the number of teaching hours in Alberta to the TALIS average would reduce the total number of hours that teachers in Alberta work to 51 hours per week, only 4 hours more than the TALIS average.

It is also worth noting that in countries such as Korea and Japan, teachers spend almost half an hour on preparation and planning for each hour of teaching. In Alberta, teachers spend roughly half that amount of time (15 to 20 minutes) for each hour of teaching. Table 6.3 shows the detailed results on the average time spent on various tasks by teachers in Alberta.

TABLE 6.3 **Average number of 60-minute hours teachers in Alberta report spending on various activities during the most recent complete calendar week, compared to TALIS averages**

	Alberta		TALIS Average	
	Hours	(S.E.)	Hours	(S.E.)
Hours spent on teaching	26	(0.3)	19	(0.0)
Hours spent on individual planning or preparation of lessons either at school or out of school	7	(0.2)	7	(0.0)
Hours spent on team work and dialogue with colleagues within the school	3	(0.1)	3	(0.0)
Hours spent on marking/correcting of student work	6	(0.2)	5	(0.0)
Hours spent on student counselling (including student supervision, virtual counselling, career guidance and delinquency guidance)	3	(0.1)	2	(0.0)
Hours spent in participation in school management	2	(0.2)	2	(0.0)
Hours spent on general administrative work (including communication, paperwork and other clerical duties you undertake in your job as a teacher)	3	(0.1)	3	(0.0)
Hours spent on communication and cooperation with parents or guardians	2	(0.1)	2	(0.0)
Hours spent engaging in extracurricular activities (e.g., sports and cultural activities after school)	4	(0.2)	2	(0.0)
Hours spent on all other tasks	2	(0.1)	2	(0.0)

Source: OECD TALIS 2013 Database

Classroom disciplinary climate affects instructional time. Classrooms are no more disruptive in Alberta than in other countries.

To assess the classroom disciplinary climate, TALIS asked teachers to indicate how strongly they agreed with the following statements about the target class:

- When the lesson begins, I have to wait quite a long time for students to quiet down.
- Students in this class take care to create a pleasant learning atmosphere.
- I lose quite a lot of time because of students interrupting the lesson.
- There is much disruptive noise in this classroom.

The responses obtained for each of the four items are presented in Table 6.4. Teachers responded on a four-point scale from "strongly disagree" to "strongly agree."

TABLE 6.4 Percentage of teachers in lower secondary education in selected countries who "agree" or "strongly agree" with various statements about their target class[1]

	When the lesson begins, I have to wait quite a long time for students to quiet down		Students in this class take care to create a pleasant atmosphere		I lose quite a lot of time because of students interrupting the lesson		There is much disruptive noise in this classroom	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**25**	**(1.5)**	**73**	**(1.6)**	**29**	**(1.5)**	**28**	**(1.5)**
Australia	27	(1.6)	66	(1.8)	32	(1.8)	25	(1.5)
Finland	31	(1.2)	59	(1.2)	32	(1.2)	32	(1.1)
Japan	15	(1.1)	81	(1.1)	9	(0.8)	13	(0.9)
Korea	30	(1.3)	76	(1.0)	35	(1.3)	25	(1.1)
Singapore	36	(0.9)	61	(0.8)	38	(0.9)	36	(0.8)
England (UK)	21	(1.2)	74	(1.3)	28	(1.3)	22	(1.1)
Flanders (Belgium)	30	(1.5)	67	(1.3)	36	(1.7)	28	(1.5)
TALIS Average	**29**	**(0.2)**	**71**	**(0.2)**	**30**	**(0.2)**	**26**	**(0.2)**

Source: OECD TALIS 2013 Database

1 These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

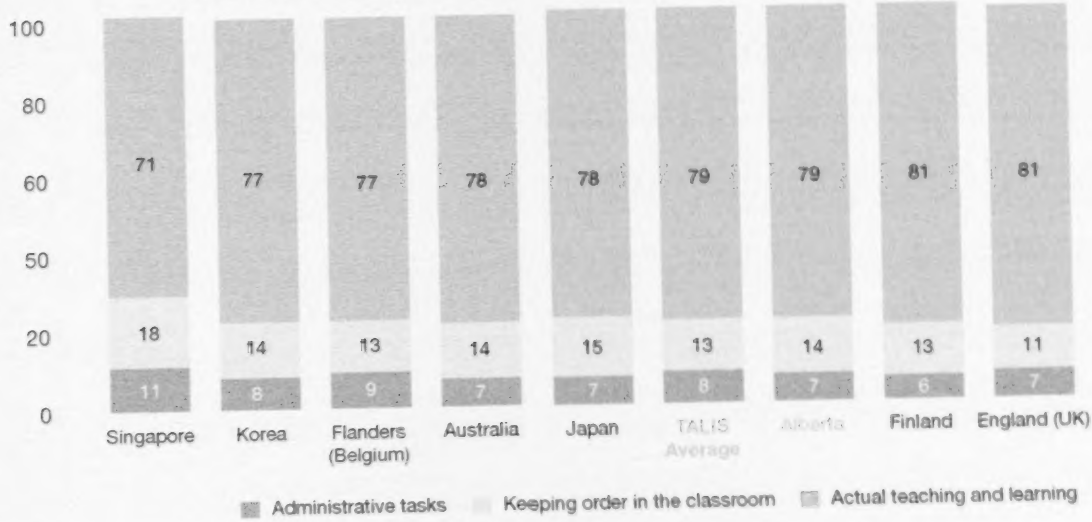
Almost a third (29%) of junior high school teachers in Alberta indicate that they lose quite a lot of time because of students interrupting the lesson. This problem seems to occur at a similar rate in other countries, as indicated by the results for the selected countries and the TALIS average. In Japan, however, this problem appears to be relatively rare. Overall, the data suggest that Alberta classrooms are no more disruptive than in other countries, but teachers in different countries might have different levels of tolerance for disruptions. Teachers in some Asian countries (i.e., Korea, Singapore) are more likely to report classroom disruptions and to spend more time dealing with such disruptions than teachers in Alberta.

In a typical Alberta classroom, the teacher spends about one fifth of the time keeping order or performing administrative tasks

Figure 6.4 shows how teachers report spending their time on three types of classroom activities: teaching and learning, administrative tasks and keeping order (behaviour management of individual students or the entire class).

Across all TALIS countries, teachers report that they spend the majority of their time (79%) on teaching and learning activities. They spend about 21% of their time keeping order or performing administrative tasks. The distribution of class time in Alberta is very similar to the TALIS averages. Teachers in England (UK) spend about 18% of their class time on administrative and other classroom management tasks; in Singapore the percentage is as high as 29%. In Asian countries (where students are perceived to be much more disciplined than in Alberta) teachers report spending as much or more time on keeping order as what we see in Alberta.

FIGURE 6.4 The proportion of time that teachers in lower secondary education report spending on three types of activities in an average lesson[1,2]



Source: OECD TALIS 2013 Database

1 These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

2 The sum of time spent in an average lesson may not add up to 100% because some teacher responses that did not add up to 100% were accepted.

6.5 Teacher collaboration

Alberta teachers are more likely to participate in collaborative professional learning than teachers in other TALIS countries

Research shows that collaboration between teachers can be a powerful tool for professional development and a driver for school improvement.[11] Through collaborative inquiry, teachers integrate new knowledge and understanding of student learning and classroom instruction into their existing knowledge of professional practice. Teachers collaborate to share teaching tasks, share ideas, or form professional learning groups. TALIS 2013 looked at two dimensions of cooperation among teachers: exchange and coordination for teaching, and professional collaboration.

OECD research suggests that professional collaboration behaviours are aligned with progressive forms of professionalism that emphasise the exchange of ideas at a deeper level than behaviours listed under "exchange and coordination for teaching."[12]

Exchange and coordination for teaching

Teachers were asked how often they engaged in the following activities in their school:

- Exchange teaching materials with colleagues
- Engage in discussions about the learning development of specific students
- Work with other teachers in my school to ensure common standards in evaluations for assessing student progress
- Attend team conferences

Professional collaboration

Teachers were asked how often they engaged in the following activities in their school:

- Teach jointly as a team in the same class
- Observe other teachers' classes and provide feedback
- Engage in joint activities across different classes and age groups (e.g., projects)
- Take part in collaborative professional learning

11 Center for Comprehensive School Reform and Improvement, 2010. Maximizing the Impact of Teacher Collaboration. Retrieved 8 May 2014: http://www.education.com/reference/article/Ref_Maximizing_Impact/

12 OECD, 2009. *Creating effective teaching and learning environments: First results from TALIS*. Paris: Organization for Economic Cooperation and Development.

Teachers responded on a six-point scale from "never" to "once a week, or more." Table 6.5 presents the percentages of teachers who report never engaging in various behaviours under teacher exchange and coordination. Table 6.6 shows the same type of responses for the professional collaboration activities. The results show that teachers are much more likely to report never engaging in activities associated with more complex forms of collaboration than in activities representing simpler forms of exchange and coordination. This finding is consistent with the findings from TALIS 2008.[13]

TABLE 6.5 Percentage of teachers in lower secondary education who report never engaging in activities related to teacher exchange and coordination[1]

	Never exchange teaching materials with colleagues		Never engage in discussions about the learning development of specific students		Never work with other teachers in my school to ensure common standards in evaluations for assessing student progress		Never attend team conferences	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**4**	**(0.5)**	**2**	**(0.4)**	**10**	**(0.9)**	**14**	**(1.0)**
Australia	2	(0.4)	1	(0.3)	4	(0.9)	10	(0.9)
Finland	10	(0.6)	1	(0.3)	9	(0.6)	8	(0.7)
Japan	11	(0.7)	6	(0.4)	17	(0.8)	4	(0.4)
Korea	7	(0.6)	25	(1.0)	10	(0.7)	10	(0.7)
Singapore	2	(0.2)	3	(0.3)	3	(0.3)	15	(0.8)
England (UK)	2	(0.4)	2	(0.3)	7	(0.6)	23	(1.1)
Flanders (Belgium)	3	(0.3)	3	(0.3)	10	(0.8)	2	(0.3)
TALIS Average	**7**	**(0.1)**	**3**	**(0.1)**	**9**	**(0.1)**	**9**	**(0.1)**

Source: OECD TALIS 2013 Database.

1 These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

13 Vieluf, S. et al. (2012), *Teaching Practices and Pedagogical Innovation: Evidence from TALIS*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264123540-en.

TABLE 6.6 Percentage of teachers in lower secondary education who report never engaging in activities related to professional collaboration

	Never teach jointly as a team in the same class		Never observe other teachers' classes and provide feedback		Never engage in joint activities across different classes and age groups		Never take part in collaborative professional learning	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Alberta	**50**	**(1.8)**	**55**	**(1.6)**	**25**	**(1.3)**	**4**	**(0.5)**
Australia	35	(2.0)	41	(2.3)	32	(1.3)	6	(0.7)
Finland	32	(1.5)	70	(1.6)	24	(1.1)	41	(1.1)
Japan	34	(0.9)	6	(0.7)	37	(1.1)	19	(0.8)
Korea	36	(1.0)	5	(0.6)	52	(1.1)	26	(0.9)
Singapore	26	(0.8)	20	(0.8)	26	(0.8)	6	(0.4)
England (UK)	41	(1.3)	18	(1.3)	34	(1.3)	10	(0.8)
Flanders (Belgium)	65	(1.4)	75	(1.8)	9	(0.7)	45	(1.1)
TALIS Average	**42**	**(0.2)**	**45**	**(0.3)**	**21**	**(0.2)**	**16**	**(0.2)**

Source: OECD TALIS 2013 Database.

The proportion of teachers never engaging in an activity grouped under "exchange and coordination for teaching typically does not exceed 10%. Korea stands out as a country where a relatively large proportion of teachers (25%) never engage in discussions about the learning development of specific students; the UK stands out as a country in which a relatively large proportion of teachers (23%) never attend team conferences. The proportion of teachers in Alberta not participating in a particular activity is in line with the TALIS averages.

For professional collaboration, Alberta has a low proportion of teachers who have never participated in professional learning (4%; TALIS average 16%), but above-average proportions who have never done joint teaching (50%; TALIS average 42%) or classroom observations (55%; TALIS average 45%). Teachers in Finland are more likely to engage in joint teaching of a same class than they are to engage in observing other teachers and providing feedback. When it comes to the latter, Finland stands out as a country with a very large proportion of teachers (70%) never observing other teachers' classes.

6.6 Summary

This chapter addressed teacher beliefs and practices. The data demonstrates that the majority of teachers in Alberta hold constructivist beliefs about how students learn and about their own role in the process of learning. This finding is fundamental for realizing the vision and goals of Inspiring Education in Alberta.[14] Alberta teachers also seem to translate their beliefs into practice by using teaching practices that enable students to play a central role in their learning. Teachers in Alberta also use a variety of assessment practices, including direct observation and student self-assessment, that are consistent with constructivist teaching and learning strategies.

The questions about the time teachers spend on various tasks show that teachers in Alberta work more hours than teachers in most other TALIS countries. This workload is mainly driven by the fact that Alberta teachers teach significantly more hours on average than teachers in other TALIS countries. The time Alberta teachers spend on non-teaching tasks is similar to the TALIS average.

Classroom disciplinary issues affect how much time teachers have to spend on teaching. Alberta classrooms are no more disruptive than classrooms in other countries: on average, teachers in Alberta spend about the same proportion of class time keeping order and doing administrative tasks as the TALIS average.

Professional collaboration among teachers is quite strong in Alberta. In particular, a larger proportion of teachers in Alberta engage in collaborative professional learning than teachers in most TALIS countries. However, joint teaching and peer classroom observation do not occur as frequently in Alberta as in other TALIS countries.

Analyses of the variations in the data are presented in chapter 6 of the international report[15] (and not shown in this Alberta report). They show that most of the differences in teacher beliefs and practices are attributable to individual differences among teachers, rather than differences among schools or countries. This finding implies that teachers have considerable autonomy in their beliefs and in choosing how they teach. In other words, the school where a teacher works is unlikely to change the beliefs and practices of that teacher. Teachers' beliefs and methods of teaching may be formed early in training and remain stable. Efforts to change teacher practices are more likely to have an impact if they are directed toward individual teachers.

14 https://inspiring.education.alberta.ca
15 OECD, (2014). TALIS 2013 Results: An International Perpective on Teaching and Learning , OECD Publishing. http://dx.doi.org/10.1787/9789264196261-en

CHAPTER 7

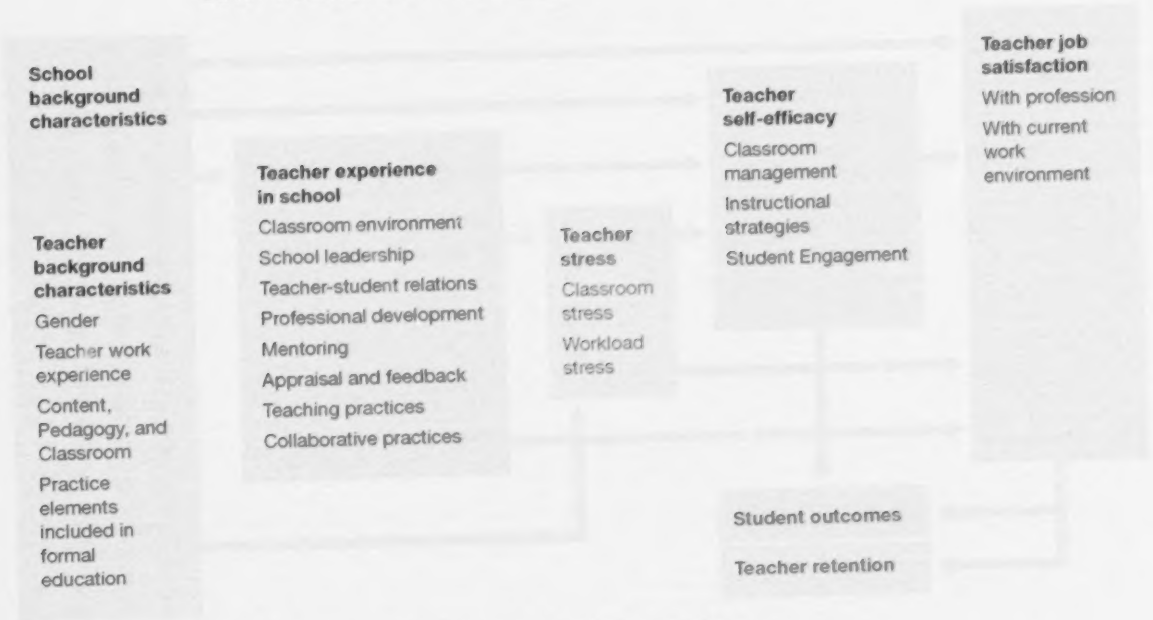
Teachers' Self-Efficacy and Job Satisfaction

Teachers' Self-Efficacy and Job Satisfaction

This chapter focuses on teachers' beliefs about their self-efficacy and their job satisfaction. Some of the factors previously examined in this report (teacher background characteristics, professional development, appraisal and feedback, and school leadership) are investigated for potential influences on teachers' beliefs about their self-efficacy and on their job satisfaction.

TALIS defines self-efficacy as the level of confidence teachers have in their abilities; job satisfaction is the sense of fulfilment and gratification that teachers get from working. Figure 7.1 illustrates the hypothesized relationships between the variables of interest in this chapter.

FIGURE 7.1 Analytical model showing the relationships between teachers' self-efficacy, teachers' job satisfaction and other teacher characteristics



Source: OECD TALIS 2013. Adapted from Klassen & Chiu (2010)[1]. Variables that are covered by the TALIS survey are in green; others in grey.

1 Klassen, R.M. and Chiu, M.M. (2010), "Effect on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress", *Journal of Educational Psychology*, Vol. 102/3, pp. 741-756.

7.1 Teacher self-efficacy

TALIS measures teacher self-efficacy based on teachers' self-reported ability to accomplish a variety of objectives and tasks. Specifically, self-efficacy is measured in three areas: classroom management, instruction and student engagement.

Classroom management

- Control disruptive behaviour in the classroom
- Make my expectations about student behaviour clear
- Get students to follow classroom rules
- Calm a student who is disruptive or noisy

Instruction

- Craft good questions for my students
- Use a variety of assessment strategies
- Provide an alternative explanation for an example when students are confused
- Implement alternative instructional strategies in my classroom

Student engagement

- Get students to believe they can do well in school work
- Help my students value learning
- Motivate students who show low interest in school work
- Help students think critically

To assess teachers' self-efficacy, TALIS asked teachers to indicate how well they can do these activities on a four-point scale ranging from "not at all" to "a lot."

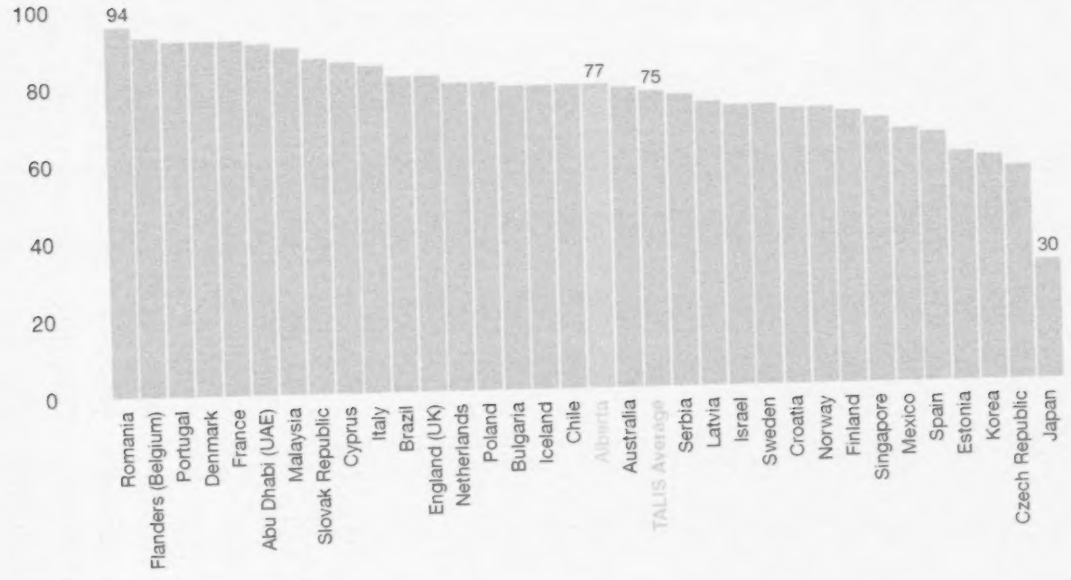
Alberta teachers believe strongly in their classroom management and instructional skills, but they are less confident about their ability to motivate students who show low interest in school work

The percentage of teachers who indicated that they are able to do all the identified tasks ("a lot" or "quite a bit") for each of the three aspects of self-efficacy are shown in Figures 7.2, 7.3 and 7.4.

Alberta teachers' responses are above the TALIS average for tasks related to efficacy in classroom management and efficacy in instruction, but below the TALIS average for tasks related to efficacy in student engagement. Countries such as Japan, Korea, Singapore and Finland all show lower scores than teachers in Alberta and have lower scores than the TALIS average on self-efficacy in instruction and classroom management. This result is surprising given how well students in these countries perform on international assessments. Perhaps, part of what we see here reflects different expectations that teachers in different countries have with respect to their own abilities. Or, perhaps, the result reflects a cultural acceptability of speaking positively about one's skills. It is also worth noting that the results for Japan, a strong PISA performing country, are very low on all three categories of self-efficacy.

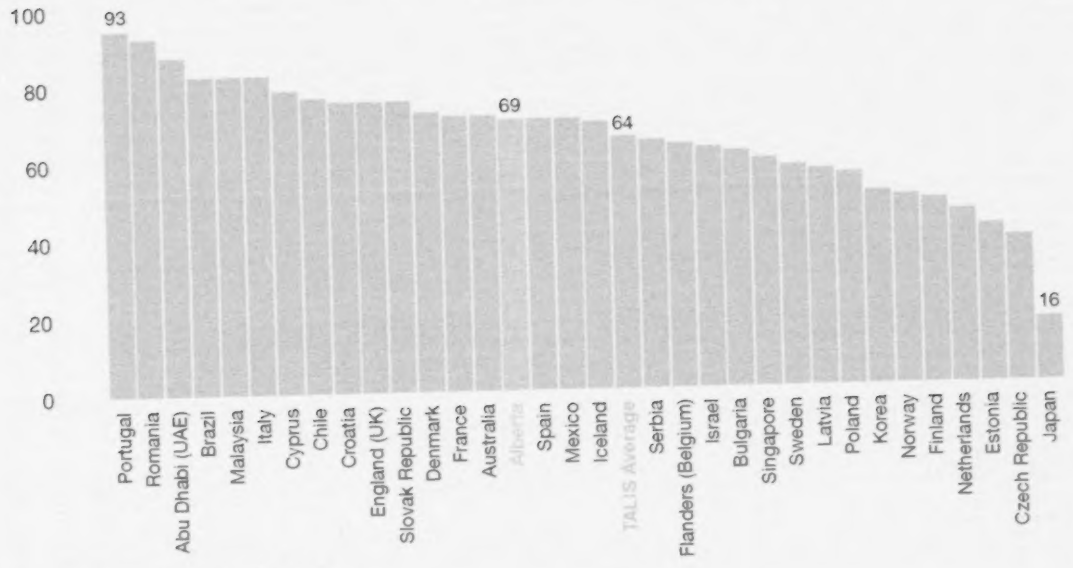
At the other end of the spectrum are teachers in countries like Romania or Portugal whose teachers show very high levels of self-reported efficacy, but whose performance on PISA is not nearly as strong as it is in Finland, Korea, Japan or Alberta.

FIGURE 7.2 Percentage of teachers who report that they can do all four activities related to efficacy in classroom management "quite a bit" or "a lot"



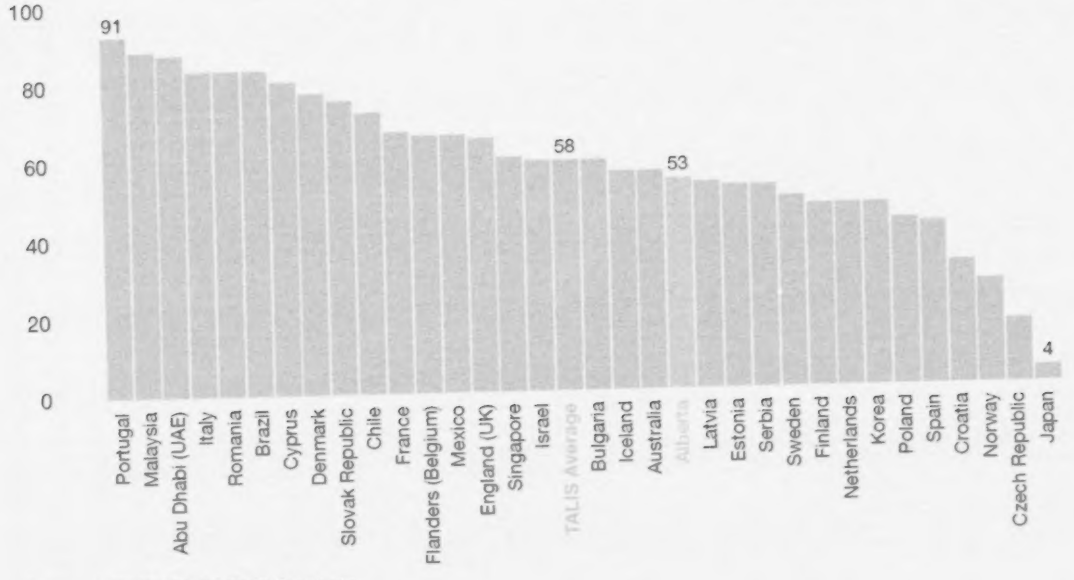
Source: OECD TALIS 2013 Database

FIGURE 7.3 Percentage of teachers who report that they can do all four activities related to efficacy in instruction "quite a bit" or "a lot"



Source: OECD TALIS 2013 Database

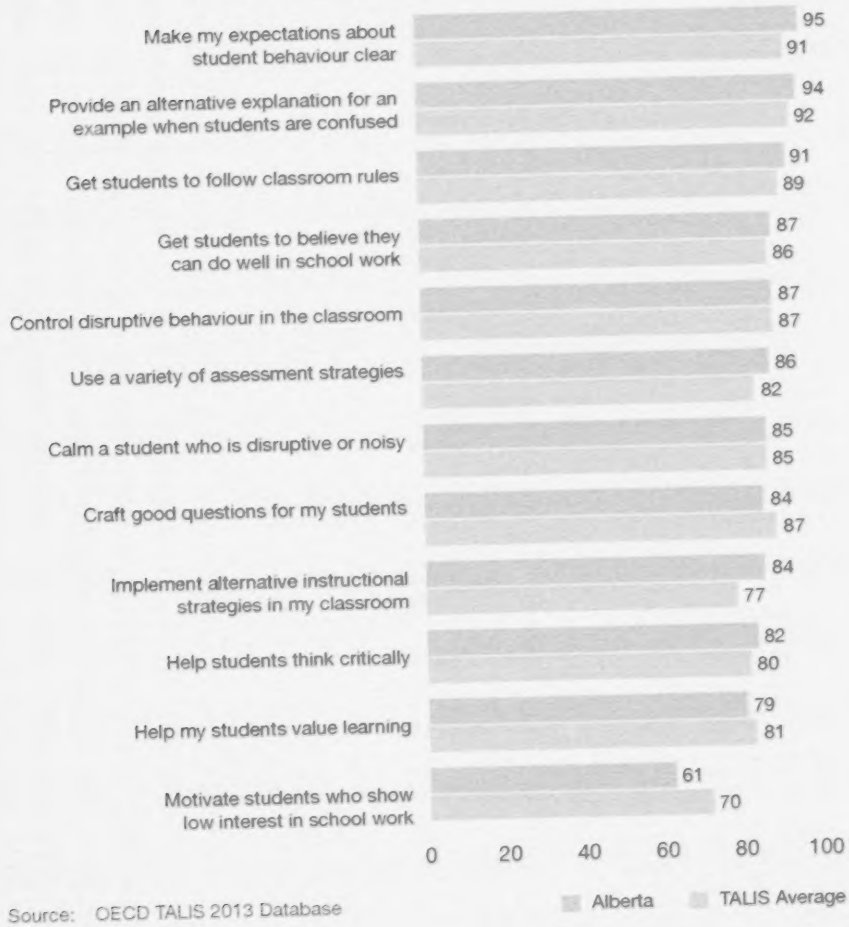
FIGURE 7.4 Percentage of teachers who report that they do can all four activities related to efficacy in student engagement "quite a bit" or "a lot"



Source: OECD TALIS 2013 Database

Alberta teachers' responses for the individual items are presented in Figure 7.5. Overall, teachers in Alberta do not appear to differ from their international colleagues. The proportion of teachers in Alberta reporting that they are able to accomplish each of the individual tasks "quite a bit" or "a lot" is very similar to TALIS averages. The results range from 95% (making expectations about behaviour clear) to 61% (motivating students). Motivating students appears to be the sole area in which teachers in Alberta are significantly less likely than their international colleagues to report efficacy.

FIGURE 7.5 Percentage of junior high school teachers in Alberta who feel they can do the following "quite a bit" or "a lot" on each of the self-efficacy items



Source: OECD TALIS 2013 Database

7.2 Teacher Job Satisfaction

Teacher job satisfaction is an important determinant of career decisions about teaching. It is a key factor in attracting and retaining good teachers and an important contributor to student performance. Exploring the issue of teacher job satisfaction helps us gain a deeper understanding of teachers' attitudes toward their work and the factors that motivate them to stay in the profession and do their very best to help students to succeed.

TALIS measures two aspects of teacher job satisfaction: satisfaction with the profession, and satisfaction with the current work environment. The following items were used for the two aspects:

Satisfaction with the current work environment

- I would like to change to another school if that were possible.
- I enjoy working at this school.
- I would recommend my school as a good place to work.
- All in all, I am satisfied with my job.

Satisfaction with the profession

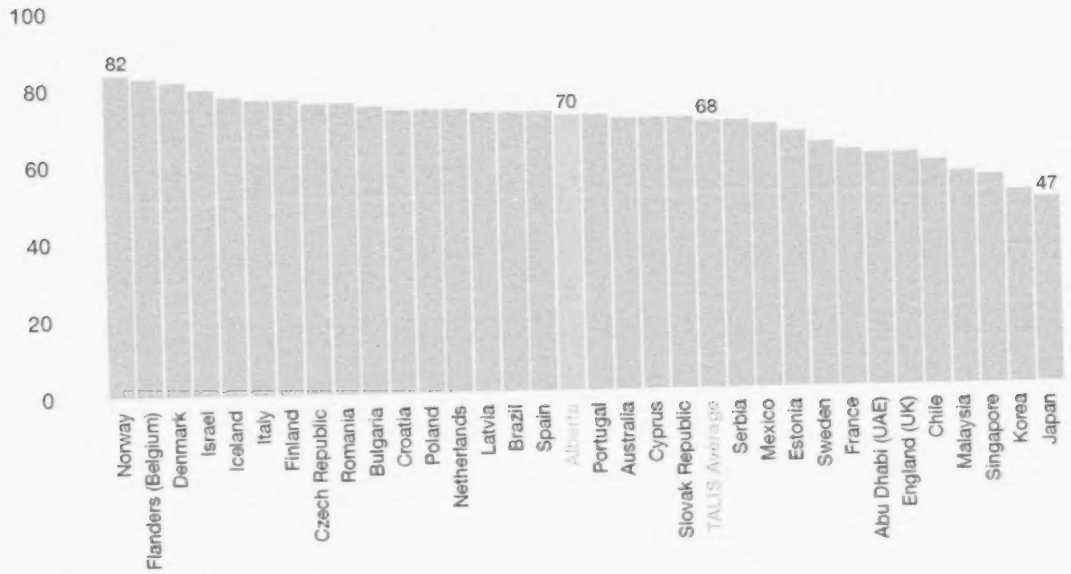
- The advantages of being a teacher clearly outweigh the disadvantages.
- If I could decide again, I would still choose to work as a teacher.
- I regret that I decided to become a teacher.
- I wonder whether it would have been better to choose another profession.

To assess teachers' job satisfaction, TALIS asked teachers whether they agreed with each of these statements using a four-point scale, which ranged from "strongly disagree" to "strongly agree."[2] Teachers' responses to these items were used to construct two indices of job satisfaction, which were then averaged to determine a composite index of teacher job satisfaction.

The majority of Alberta teachers express high levels of satisfaction with their current work environment, but almost a quarter would prefer to change to another school

2 For the question "I regret that I decided to become a teacher," we used "strongly disagree" as indicative of a positive attitude.

FIGURE 7.6 Percentage of teachers who expressed positive responses for all statements related to satisfaction with their work environment

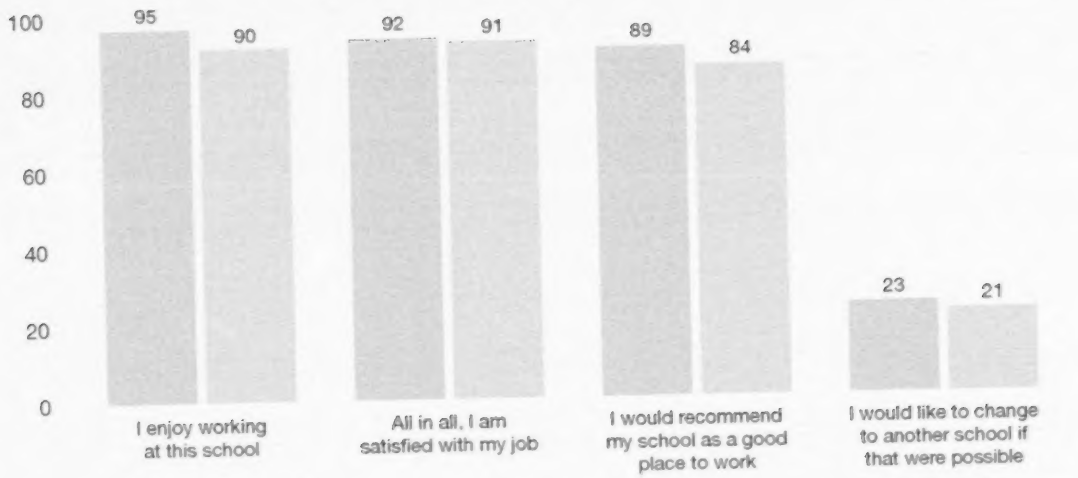


Source: OECD TALIS 2013 Database

Figure 7.6 shows the percentage of teachers who responded positively to all of the statements related to satisfaction with their current work environment for all countries. Figure 7.8 shows Alberta teachers' responses to the individual items related to satisfaction with their work environment.

In Alberta, 70% of teachers responded positively to all four items related to satisfaction with their current work environment. This finding is slightly higher than the TALIS average of 68% and higher than some of the high-performing Asian countries such as Singapore (53%), Korea (49%) and Japan (47%). However it is not as high as the satisfaction levels expressed by teachers in Finland (75%), which is also a high-performing country in PISA. Thus, teachers in Asian countries, where students are among the top PISA performers, report both relatively low levels of job satisfaction and low levels of self-efficacy.

FIGURE 7.7 Percentage of junior high school teachers in Alberta who "agree" or "strongly agree" with the following statements related satisfaction with their work environment



Source: OECD TALIS 2013 Database

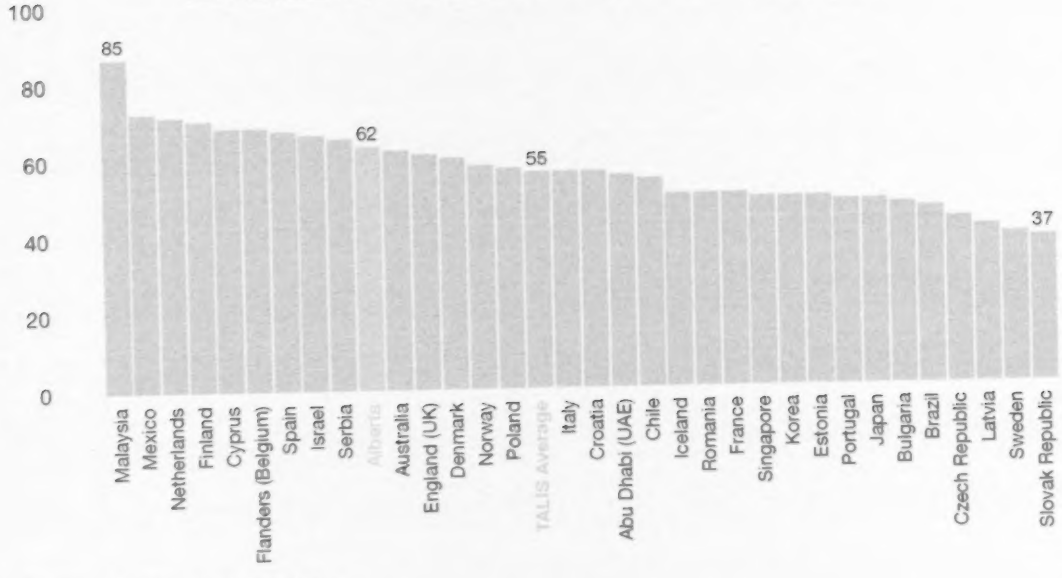
Looking at the individual items, similar to what we have seen with respect to self-efficacy levels, teachers in Alberta do not seem to differ from their international peers when it comes to job satisfaction. For example, 91% of teachers across TALIS countries reported overall satisfaction with their job compared to 92% for teachers in Alberta.

In Alberta, 95% of teachers say they enjoy working at their current school, but a smaller proportion (89%) would recommend their school as a good place to work. Almost a quarter (23%) would like to change to another school if that was possible. Similarly, 90% of teachers across TALIS countries reported that they enjoy working at their current school, 84% would recommend their school and 21% would like to change to another school. In essence, both in Alberta and in other TALIS countries, we have teachers who claim that they enjoy working in their current school, but they would still prefer to move to a different school.

The majority of Alberta teachers express high levels of satisfaction with their profession, but slightly over a third doubt that they chose the right profession

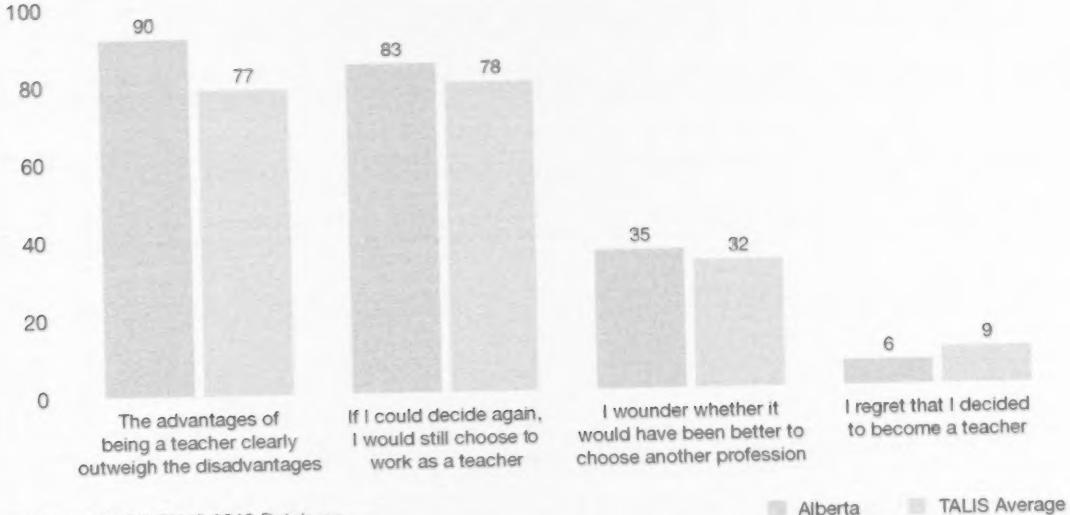
Figure 7.8 shows the percentage of teachers who responded positively to all the statements related to satisfaction with their profession for all countries. Figure 7.8 shows Alberta teachers' responses to the individual items related to satisfaction with their profession.

FIGURE 7.8 Percentage of teachers who expressed positive responses for all statements related to satisfaction with their profession



Source: OECD TALIS 2013 Database

FIGURE 7.9 Percentage of junior high school teachers in Alberta who "agree" or "strongly agree" with the following statements related satisfaction with their profession



Source: OECD TALIS 2013 Database

Overall teachers in Alberta express higher levels of satisfaction with their profession than the TALIS average. Compared to other countries, Alberta's results are similar to what was observed as satisfaction with current work environment: satisfaction levels with the profession among Alberta's teachers are above the TALIS average and are higher than those reported by teachers in high-performing Asian countries (Singapore, Korea and Japan), but lower than Finland, a high-performing European country.

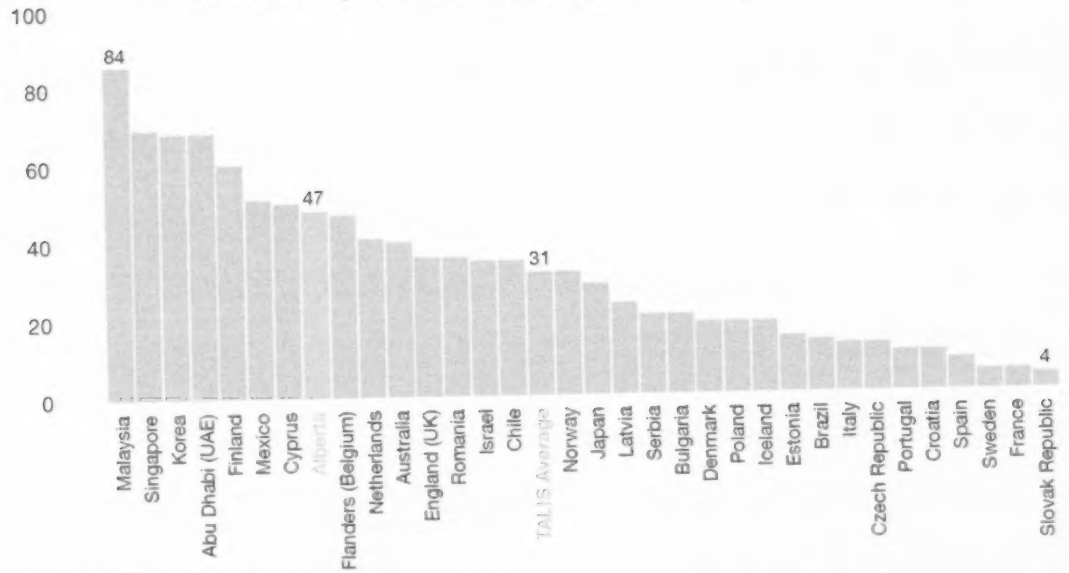
On the individual items, 90% of teachers in Alberta believe that the advantages of being a teacher outweigh the disadvantages, yet only 83% would still choose to work as a teacher and slightly over a third (35%) are wondering if they chose the right profession. On average, across all TALIS countries a similar percentage of teachers who are satisfied with the advantages of being a teacher (77%) would still choose to be a teacher (78%) if they had to do it again. However, about a third (32%) are not sure if they are in the right profession.

7.3 Teachers' perception of how the teaching profession is valued in society

Even though the majority of Alberta teachers are satisfied with their profession, many teachers believe that the teaching profession is not valued in society

A negative view of the teaching profession, either by society as a whole or by teachers themselves, can affect the recruitment of high-quality candidates. It can also affect whether teachers stay in the profession. Figure 7.10 shows the percentage of teachers who think that teaching is valued in society.

FIGURE 7.10 Percentage of teachers who "agree" or "strongly agree" that teaching is valued in society

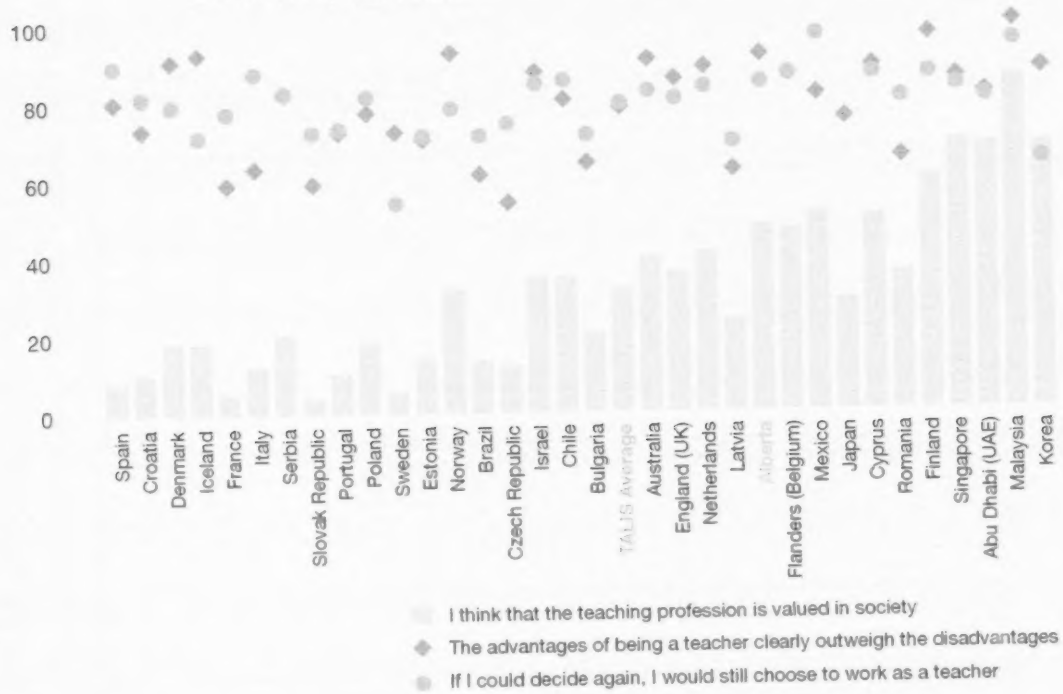


Source: OECD TALIS 2013 Database

The data show that in the majority of countries less than half of teachers believe that their profession is valued in society. In some extreme cases (e.g., Spain, Sweden, France and Slovak Republic), this proportion is less than 10%. In this context, Alberta results look good, even though only less than half (47%) of our teachers believe that their profession is valued by the society. At the other end of the spectrum, we have Asian countries, in particular Malaysia, where the proportion of teachers believing that their profession is valued by society exceeds 60%. This is interesting because some of these countries (e.g., Singapore and Korea) were among countries with the lowest levels of teachers' satisfaction with their current work environment and with their profession. This finding would suggest that the link between how teachers perceive societal views of their profession and how they themselves feel about their profession is rather weak.

Figure 7.11 illustrates the connection between teachers' satisfaction with their profession and with their current job on one hand, and their beliefs about whether society values the teaching profession. The two variables used to represent satisfaction with the profession are the percentage of teachers who agree that the advantages of being a teacher clearly outweigh the disadvantages and the percentage of teachers who agree that they would still choose to work as a teacher if they could decide again.

FIGURE 7.11 The gap between the percentage of teachers who are satisfied with the current profession and those who agree that teaching is a valued profession



Source: OECD TALIS 2013 Database

The countries are arranged by the size of the gap between the proportion of teachers satisfied with their profession and the proportion of teachers who believe that the society values the teaching profession.

The data show that in all TALIS-participating countries, teachers are more likely to be satisfied with their profession than to think that their profession is valued in the society.

The gap is slightly narrower in Alberta compared to the TALIS average: 47% of teachers in Alberta believe that the teaching profession is valued in society, while 90% agree that the advantages of being a teacher outweigh the disadvantages, and 83% would choose to work as a teacher if they had to do it all over again.

The proportion of teachers in high PISA–performing countries like Finland (59%), Singapore (68%) and Korea (67%) who believe that the teaching profession is valued in society is higher than in Alberta (47%). The gap between the proportion of teachers satisfied with their profession and the proportion of teachers who believe that the teaching profession is valued in the society is narrower than in Alberta.

Teachers' perceptions about whether a society values the teaching profession are shaped not just by what they experience outside the school, but also by what happens in the school. The sense that teachers are seen as valuable partners in the education system is of particular importance

The OECD performed further analysis of TALIS data to determine if specific teacher, or school characteristics, are associated with teachers' perception of whether a society values their profession.

An analysis of school characteristics revealed that in all but one TALIS countries, the extent to which teachers can participate in decision-making has a strong positive association with the likelihood of teachers believing that teaching is a valued profession in society. In Alberta, teachers who teach in schools where the principal indicated that staff are provided with opportunities to actively participate in school decisions are almost 2.5 times more likely to agree that teaching is valued in society than teachers working in schools in which such opportunities do not exist. This analysis showed that teachers' perceptions about how the society values the teaching profession can be positively influenced by what happens in the school. When teachers are seen as valuable partners in the education system and are included in decision-making processes within their schools, this is especially true.

7.4 Teacher self-efficacy and job satisfaction in relation to teacher characteristics

TALIS used multiple regression analysis to examine the extent to which teacher self-efficacy and job satisfaction are related to teacher characteristics such as gender, years of teaching experience and formal training while controlling for teacher educational attainment. Composite scale scores[3] for self-efficacy and job satisfaction were used in these analyses. The self-efficacy score was derived from three scales: efficacy in classroom management, efficacy in instruction and efficacy in student engagement. Two scales were used to determine the composite score for job satisfaction: satisfaction with current work environment and satisfaction with the profession. The results for Alberta and other general observations are summarized in Table 7.1.

In Alberta, teaching experience improves self-efficacy but does not affect job satisfaction

A strong positive relationship between years of teaching experience and teachers' self-efficacy was observed in Alberta and most of the TALIS-participating countries. As teachers gain experience, they feel more confident about their ability to accomplish important tasks.

At the same time, years of teaching experience do not have any significant relationship with teacher job satisfaction in Alberta. However, in 19 other TALIS countries years of teaching experience show a weak to moderate negative relationship with teacher job satisfaction. The pattern in Alberta is rather a good news story. While teachers in other countries typically express less job satisfaction the longer they work—which can probably impact their enthusiasm, engagement, etc., all of which are likely to influence student learning outcomes—Alberta's older and more experienced teachers are no less satisfied with their job and their profession than their younger colleagues.

Other teacher characteristics that show a significant weak to moderate relationship with teacher self-efficacy and job satisfaction are gender and the extent to which content, pedagogy and classroom practice elements for all subjects that teachers teach were included in a teacher's formal training.

Self-efficacy and job satisfaction are also correlated—an increase in one is linked to an increase in the other. This relationship exists even when the impact of other factors such as gender, educational attainment, work experience, and content, pedagogy and classroom practice elements of the subject(s) taught included in formal education are taken into account.

3 Scale scores were determined through factor analysis. The factor scores were rescaled to have a standard deviation of 2, and the value 10 on the scale was made to coincide with the midpoint of the scale. A score of 10 for a scale corresponds to cases where the average answer to the items that make up this scale was 2.5 (for job satisfaction, 1 is assigned to "strongly disagree," a 2 to "disagree," a 3 to "agree" and a 4 to "strongly agree." For self-efficacy 1 is assigned to "not at all," 2 to "to some extent," 3 to "quite a bit," and 4 to "a lot."

TABLE 7.1 Summary of multiple regression analysis results on the effect of teacher characteristics on self-efficacy and job satisfaction

	SELF-EFFICACY	JOB SATISFACTION
Gender	• In Alberta, male teachers reported lower levels of self-efficacy than female teachers • Similar pattern is also present in 17 other countries	• In Alberta there is no significant relationship between gender and job satisfaction • In 13 countries male teachers reported lower levels of job satisfaction
Years of experience	• In Alberta, teachers with more than 5 years of experience showed higher levels of self-efficacy than less experienced teachers • Similar pattern is also present in most countries	• In Alberta, there is no significant relationship between years of teaching experience and job satisfaction • In contrast, in 12 other TALIS countries teachers with more than 5 years of experience reported lower levels of job satisfaction
The extent to which content, pedagogy and classroom practice elements for all subjects that a teacher teaches are included in a teacher's formal training	• In Alberta, teachers who report the inclusion in formal training of these three elements for each of the subjects they teach have higher levels of self-efficacy • Similar results were observed for almost all TALIS countries	• In Alberta, teachers who report the inclusion in formal training of these three elements for each of the subjects they teach have higher levels of job satisfaction. • Similar results were observed for almost all TALIS countries

Controlling for teacher educational attainment

Source: OECD TALIS 2013 Database

Figure 7.12 is used to illustrate the differences in the average scores on self-efficacy and job satisfaction by years of teaching experience for Alberta. The chart shows that teacher self-efficacy increases steadily with years of teaching experience and levels off slightly after 25 years of teaching. Job satisfaction, on the other hand, decreases slightly with teaching experience up to 20 years of teaching, and then begins to rise. Both self-efficacy and job satisfaction appear to reach their maximum levels after 30 years of teaching.

FIGURE 7.12 Alberta teachers' self-efficacy and job satisfaction levels by years of teaching experience

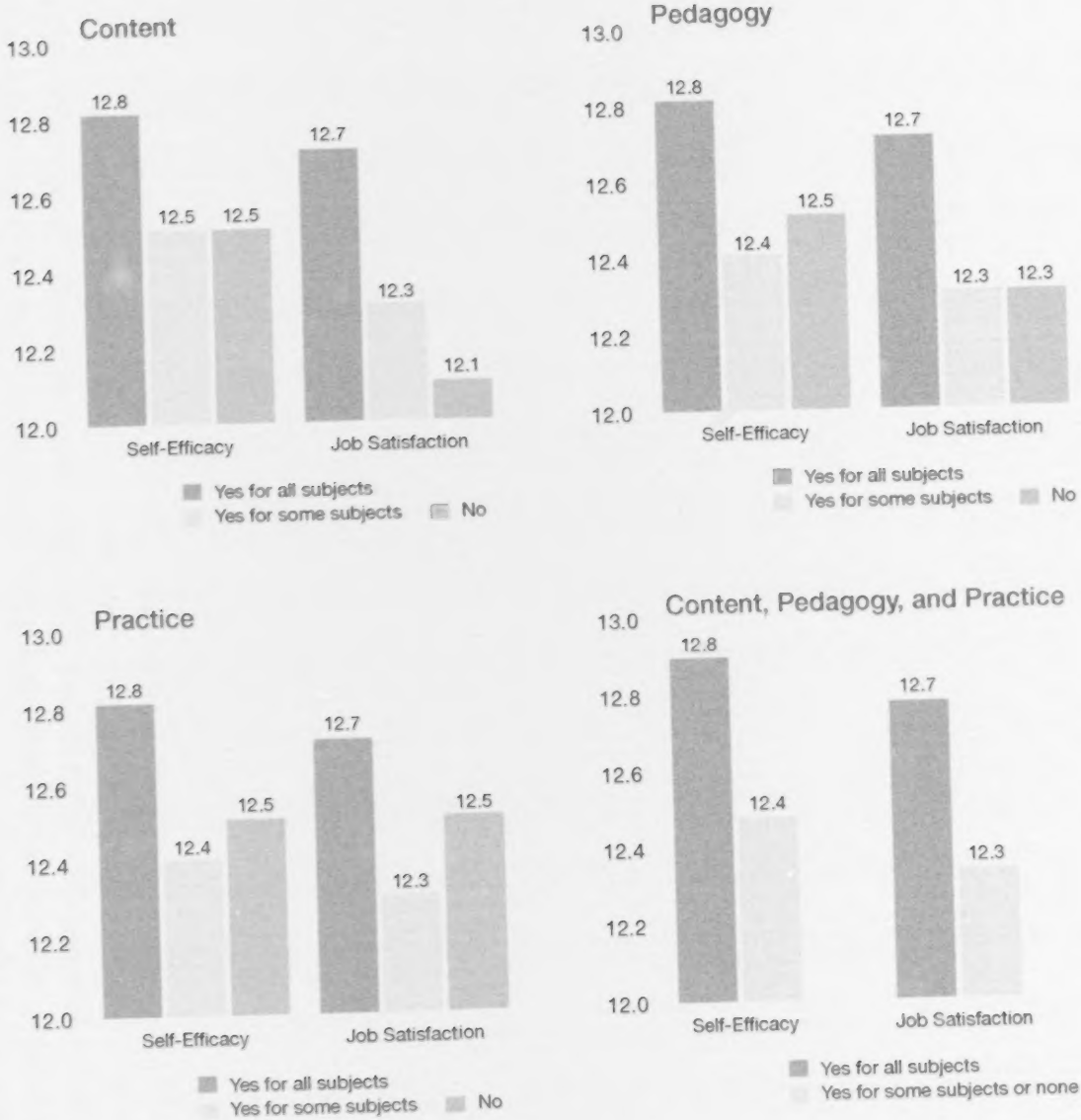
Source: OECD TALIS 2013 Database

1 A score higher than 10 indicates agreement with the items in the scale or responses that are higher than the midpoint of the scaled scores. A score below 10 indicate disagreement with the items or responses that are lower than the midpoint of the scaled scores.

Teachers whose formal training included content, pedagogy and practice of all subjects they teach have higher levels of self-efficacy and job satisfaction than those whose formal training included those elements only for some, or none, of the subjects they teach

The issue of whether the teacher's formal training covered content, pedagogy and classroom practice elements for all, some or none of the subjects they currently teach has a significant effect on teacher self-efficacy and job satisfaction. For almost all countries, the same pattern was observed: teachers whose formal training did not cover an element (content, pedagogy, practice) for all of the subjects they currently teach, reported lower self-efficacy and job satisfaction levels.

FIGURE 7.13 Alberta teachers' self-efficacy and job satisfaction and the extent to which their formal training included content, pedagogy and practice for the subject(s) they currently teach



Source: OECD TALIS 2013 Database

Figure 7.13 shows the average levels of teacher self-efficacy and job satisfaction grouped by teachers' responses to questions about the degree to which elements of content, pedagogy and practice for all, some or none of the subjects they currently teach were included in their formal training. In all instances, teachers who indicated that their formal training covered these elements for all the subjects they currently teach reported higher levels of self-efficacy and job satisfaction than those who either have the elements included for only some, or none, of the subjects they teach. The results also indicated that it does not seem to matter whether teachers have no preparation for any of the subjects they teach, or whether they have preparation for only some subjects. In both cases, their level of self-efficacy seems to be the same.

7.5 Teachers' self-efficacy and job satisfaction in relation to classroom characteristics and environment

Certain classroom characteristics can make a teacher's work more challenging, which in turn can be expected to influence job satisfaction and the sense of self-efficacy. TALIS data were analysed to determine whether any of the following factors can affect a teacher's self-efficacy and job satisfaction:

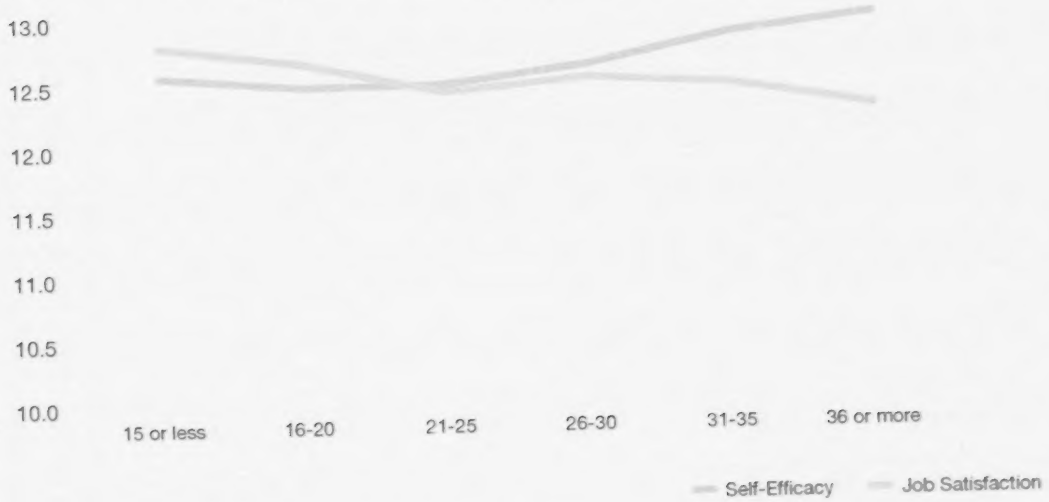
- class size
- challenging school environments
  - schools with than 10% special needs
  - schools with more than 10% second language learners
  - schools with more than 30% students from socioeconomically disadvantaged homes
- challenging classroom characteristics
  - classrooms with more than 10% low academic achievers
  - classrooms with more than 10% students with behavioural problems
  - classrooms with 10% or more academically gifted students

The results obtained are summarized in Table 7.2.

The size of a teacher's class does not impact teacher self-efficacy or job satisfaction in Alberta and in most other TALIS countries

Figure 7.14 shows the relationship between teacher-reported class sizes and their level of self-efficacy and job satisfaction. The non-significant relationship in Alberta is depicted by the inconsistent patterns of the line graphs for both self-efficacy and job satisfaction. Teacher self-efficacy remains virtually flat up to class sizes of about 25 and then begins to increase slightly with further increases in class size. Teacher job satisfaction appears to drop slightly as class size increases up to about 25 and then remains almost flat with additional increases in class size.

FIGURE 7.14 Relationship between teacher-reported class sizes and their level of self-efficacy and job satisfaction for Alberta



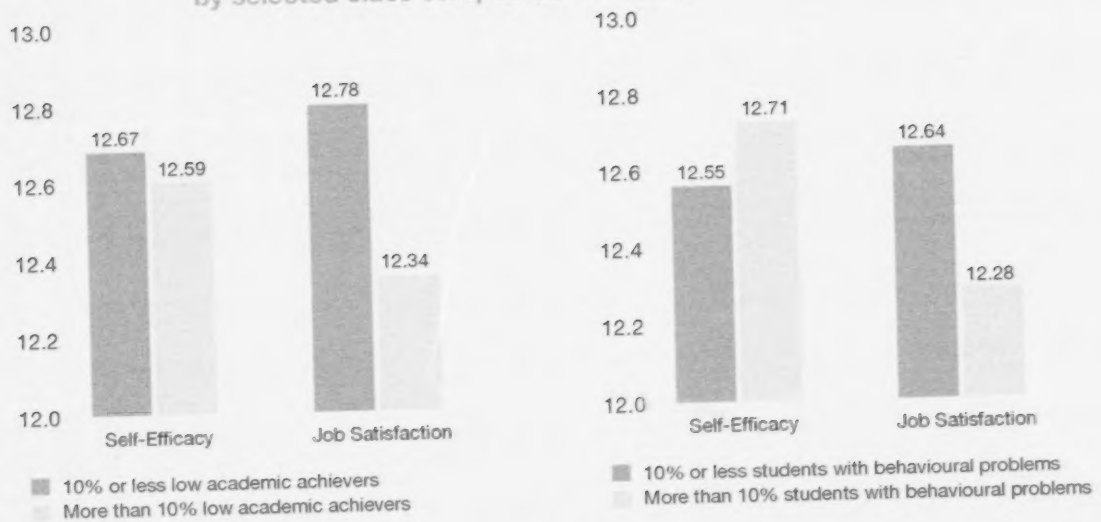
Source: OECD TALIS 2013 Database

The composition of the students in classrooms seems to have a stronger impact on job satisfaction than on self-efficacy. Table 7.2 shows that job satisfaction levels are lower among teachers who teach classrooms with more than 10% of low-achieving students, or in which over 10% of students have behavioural problems. This pattern is present both in Alberta and in most, or all, TALIS countries.

The impact of classroom composition on self-efficacy is much less consistent. For example, in Alberta teachers teaching classes in which over 10% of students are low achievers report self-efficacy levels that are similar to teachers in which such students account for less than 10%. However, there is a significant difference in self-efficacy under similar class composition conditions in nine countries.

Similarly, while Alberta teachers teaching classes in which at least 10% of students have behavioural problems report slightly higher, but not significantly different levels of self-efficacy than teachers whose classes have a smaller proportion of students with behaviour problems, the reverse is the case in 16 TALIS countries.

FIGURE 7.15 Alberta teachers' self-efficacy and job satisfaction by selected class composition variables



Source: OECD TALIS 2013 Database

TABLE 7.2 Summary of multiple regression analysis results on classroom characteristics on self-efficacy and job satisfaction

	SELF-EFFICACY	JOB SATISFACTION
Classrooms with more than 10% low academic achieving students	• No relationship for Alberta • Positive relationship for nine countries where results were significant	• Negative relationship for Alberta and all other countries
Classrooms with more than 10% students with behavioural problems	• No relationship for Alberta • Negative relationship for all other 16 countries where the relationship was significant	• Negative relationship for Alberta and almost all other countries
Classrooms with more than 10% academically gifted students	• No relationship for Alberta • Positive relationship for 17 countries where results were significant	• No relationship for Alberta • Positive relationship for 23 countries where results were significant

Source: OECD TALIS 2013 Database

Controlling for teacher gender, experience, educational attainment, formal education or training on content, pedagogy and classroom practice for the subject(s) taught

7.6 Teachers' self-efficacy and job satisfaction in relation to school leadership and teacher-student relations

School climate and school leadership impact teachers' self-efficacy and job satisfaction. For example, working with a principal who encourages teachers to get involved in decision-making tasks, shares information with them and involves them more in management decisions has been found to have a positive influence on teachers' involvement and commitment to their teaching and their job satisfaction.[4]

TALIS examined two aspects of the school leadership relationship: the level of opportunities that teachers have to share in the decision-making in their schools and the instructional leadership that school principals provide.[5] Similarly, school climate was assessed along two dimensions: teacher-student relationships and teacher-teacher relationships.

The following aspects of school leadership and school climate were taken into account to determine their impact on self-efficacy and job satisfaction:

Distributed Leadership

- This school provides staff with opportunities to actively participate in school decisions

Instructional Leadership Index

- I took actions to support co-operation among teachers to develop new teaching practices
- I took actions to ensure that teachers take responsibility for improving their teaching skills
- I took actions to ensure that teachers feel responsible for their students' learning outcomes

Teacher-Student Relationships Index

- In this school, teachers and students usually get on well with each other
- Most teachers in this school believe that the students' well-being is important
- Most teachers in this school are interested in what students have to say
- If a student from this school needs extra assistance, the school provides it

4 Bogler, R. 2001. The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly*, 37, 662.

5 Answers to these questions came from school principals, while questions pertaining to "school climate" came from teachers.

Teacher-Teacher Relationships Index

- Teach jointly as a team in the same class
- Observe other teachers' classes and provide feedback
- Engage in joint activities across different classes and age groups (e.g., projects)
- Exchange teaching materials with colleagues
- Engage in discussions about the learning development of specific students
- Work with other teachers in my school to ensure common standards in evaluations for assessing student progress
- Attend team conferences
- Take part in collaborative professional learning

The results from multiple regression analysis establishing how teachers' self-efficacy and job satisfaction are affected by school leadership and school climate variables are summarized in Table 7.3.

TABLE 7.3 Summary of multiple regression analysis results[1] of teachers' self-efficacy and job satisfaction with school leadership and school climate variables

	SELF-EFFICACY	JOB SATISFACTION
Teacher-student relations	Positive relationship for Alberta and all other countries	Positive relationship for Alberta and all other countries
Teacher–teacher relationship	Positive relationship for Alberta and all other countries	Positive relationship for Alberta and all other countries
Distributed leadership: Staff are provided opportunities to actively participate in school decisions	Positive relationship for Alberta and most other countries	Strongest positive relationship for Alberta and all other countries
Instructional leadership	No relationship for Alberta and most other countries	No relationship for Alberta and most other countries

Source: OECD TALIS 2013 Database

1 The following variables were controlled for in this analysis: teacher gender, experience, educational attainment, formal education or training on content, pedagogy and classroom practice for the subject(s) taught, class size, proportion of low academic achievers, proportion of students with behavioural problems and proportion of gifted students.

Teachers who teach in schools where staff are provided opportunities to actively participate in school decisions report high levels of job satisfaction

The summary of the analysis in Table 7.3 shows that teacher-student relations, teacher cooperation and distributed leadership all have a positive relationship with teacher job satisfaction. Distributed leadership had the strongest positive relationship not only for Alberta but for all other countries. Teachers who teach in schools where staff are provided opportunities to actively participate in school decisions consistently report higher levels of job satisfaction in Alberta and in all other TALIS countries.

Student-teacher relations, teacher cooperation and distributed leadership also have positive relationships with teacher self-efficacy, but the relationships were not as strong as they were with job satisfaction. In all countries, when teachers report more positive relationships with students and collaborative relationships with other teachers, they report significantly higher levels of self-efficacy.

Instructional leadership did not appear to have any relationship with teacher self-efficacy or job satisfaction in Alberta and most of the countries. Since instructional leadership was based on responses from principals, there is a possibility of a difference of opinions between teachers and their principals, which could explain why the relationship is weak.

The results suggest that in-school relations are important for teachers' self-efficacy and job satisfaction. When school leaders focus on encouraging collaborative relationships among teachers and positive relationships between teachers and students in their schools, teachers' feeling of self-efficacy and job satisfaction increase. When school leaders work to provide school staff with opportunities to share in decision-making, teachers are more likely to have higher levels of job satisfaction. These relationships exist regardless of age, years of teaching experience, gender, class size and class composition. However, there is also little evidence that instructional leadership is associated with higher self-efficacy or job satisfaction among teachers.

7.7 Teachers' self-efficacy and job satisfaction in relation to professional development of teachers

This section examines the relationship between teachers' participation in different types and aspects of professional development and their self-efficacy and job satisfaction levels. The results from multiple regression analysis of professional development variables on teacher self-efficacy and job satisfaction are summarized in Table 7.4.

TABLE 7.4 Summary of multiple regression analysis results[1] of teachers' self-efficacy and job satisfaction with professional development variables

	SELF-EFFICACY	JOB SATISFACTION
Participation in a formal induction program	• No relationship for Alberta • Positive relationship for 14 countries	• No relationship for Alberta • Positive relationship for 8 countries • Negative relationship for 2 countries
Having a mentor	• No relationship for Alberta • Positive relationship for only 3 countries	• No relationship for Alberta • Positive relationship for 15 countries
Serving as a mentor	• Positive relationship for Alberta and 15 other countries	• No relationship for Alberta • Positive relationship for 8 countries
Participation in mentoring and/or peer observation and coaching as part of a formal school arrangement	• No relationship for Alberta • Positive relationship for 14 countries	• Positive relationship for Alberta and 6 other countries
Participation in courses/ workshops, education conferences or seminars	• No relationship for Alberta and almost all other countries • Positive relationship for 3 countries	• No relationship for Alberta and almost all other countries • Positive relationship for 4 countries

Source: OECD TALIS 2013 Database

1 Significance was tested at the 5% level, controlling for teacher gender, experience, educational attainment, formal education or training on content, pedagogy and classroom practice for the subject(s) taught, class size, low academic achievers, students with behavioural problems, and gifted students.

Teachers who serve as mentors express higher levels of self-efficacy

In Alberta, neither participation in a formal induction program or professional development courses, conferences or seminars nor having a mentor is associated with higher levels of job satisfaction or self-efficacy. The participation rate in professional development among Alberta teachers is at almost 100% (see chapter 4), so the lack of a relationship may be simply a function of the lack of variability among Alberta teachers in their professional development participation. However, the fact that having a mentor or having participated in a formal induction program do not seem to affect either self-efficacy or job satisfaction is not as easy to explain and requires further analysis.

Across all TALIS countries, acting as a mentor is consistently related to higher levels of self-efficacy. On the other hand, having a mentor is more likely to be positively associated with teacher job satisfaction than acting as mentor.

In Alberta, acting as a mentor is associated with higher self-efficacy, but it has no impact on job satisfaction while having a mentor does not appear to have any impact on self-efficacy or job satisfaction. Participation in mentoring and/or peer observation and coaching as part of a formal school arrangement is also related to higher job satisfaction in Alberta (and 14 other countries) but not to self-efficacy.

7.8 Teachers' self-efficacy and job satisfaction in relation to teacher appraisal and feedback

Appraisal and feedback can play an important role in teachers' motivation and attitudes as well as their self-efficacy and job satisfaction. Analysis of TALIS data showed that feedback and appraisal is not used to reward or punish teachers in Alberta but mainly as a development strategy to help teachers to improve their skills (see chapter 5). Appraisal and feedback can therefore have a significant impact on classroom instruction and teacher motivation.

TALIS used six measures of appraisal and feedback, all based on teachers' responses, in the analysis to determine their relationship with teacher self-efficacy and job satisfaction.

Number of evaluators

1. Teacher receives feedback from direct classroom observation from at least two evaluators.

Types of feedback

2. Teacher receives feedback from student surveys.
3. Teacher receives feedback from students' test scores.
4. Teacher feedback emphasises student behaviour and classroom management.

Teachers' perception of appraisal and feedback

5. Teacher appraisal and feedback impacts classroom teaching in the school.
6. Teacher appraisal and feedback are largely done to fulfil administrative requirements.

Based on the findings in chapter 5, it is important to look at whether teachers receive feedback from more than one appraiser as well as the type of feedback they receive (such as the results of student surveys or students' test scores or feedback on classroom management). In addition, teachers' perceptions of the impact of the appraisal are relevant. (For example, are appraisals perceived as affecting classroom teaching or simply as an activity for administrative purposes?)

The results obtained from multiple regression analysis are summarised in Table 7.5.

TABLE 7.5 Summary of multiple regression analysis results[1] of teachers' self-efficacy and job satisfaction with teacher appraisal and feedback variables

	SELF-EFFICACY	TEACHER JOB SATISFACTION
Teacher receives feedback based on direct classroom observation from at least two evaluators	• No relationship for Alberta • Positive relationship for 13 countries	• Positive relationship for Alberta and 22 other countries
Teacher receives feedback based on student surveys	• Positive relationship for Alberta and 28 other countries	• Positive relationship for Alberta and 19 other countries
Teacher receives feedback based on students' test scores	• No relationship for Alberta • Positive relationship for 24 countries	• No relationship for Alberta • Positive relationship for 17 countries
Teacher feedback emphasize student behaviour and classroom management	• No relationship for Alberta • Positive relationship for 17 countries	• Positive relationship for Alberta and 22 other countries
Teacher appraisal and feedback in the school impacts classroom teaching	• No relationship for Alberta • Positive relationship for 10 countries	• Positive relationship for Alberta and 29 other countries
Teacher appraisal and feedback are largely done to fulfil administrative requirements	• No relationship for Alberta • Negative relationship for 14 countries	• Negative relationship for all countries • Strong negative relationship of Alberta and 24 other countries.

Source: OECD TALIS 2013 Database

1 Controlling for teacher gender, experience, educational attainment, formal education or training on content, pedagogy and classroom practice for the subject(s) taught, class size, low academic achievers, students with behavioural problems, and gifted students in each model. Each model was run independently.

Teachers in Alberta who believe that teacher appraisals are done largely to fulfil administrative requirements have lower levels of job satisfaction

In Alberta, and in the majority of TALIS countries, teachers who believe that appraisal and feedback are done to fulfil administrative requirements tend to have lower levels of job satisfaction. This belief about appraisal and feedback does not appear to affect significantly teacher self-efficacy in Alberta, but it was found to be negatively related to teacher self-efficacy in more than a third of the TALIS countries.

Job satisfaction increases when teachers receive feedback focusing on student behaviour and classroom management, and when they believe that teacher appraisal and feedback affects classroom teaching. Job satisfaction is also weakly associated with feedback from direct classroom observation and feedback from student surveys.

7.9 Teachers' self-efficacy and job satisfaction in relation to teachers' beliefs and practices

Teachers' belief in constructivist teaching strategies is positively related to their self-efficacy and job satisfaction in Alberta and other TALIS countries

Constructivist teaching is based on the belief that learning occurs when learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information. The results presented in chapter 6 show that a majority of junior high school teachers in Alberta agree with constructivist beliefs about how students learn best and that they view that their role as teachers is to facilitate student inquiry. This section examines the relationship between teachers' reported beliefs and practices and their self-efficacy and job satisfaction, while controlling for teacher characteristics, class size and class composition. The results of the analyses are summarized in Table 7.6.

TABLE 7.6 Summary of multiple regression analysis results[1] of teachers' self-efficacy and job satisfaction in relationship with teacher beliefs and practices

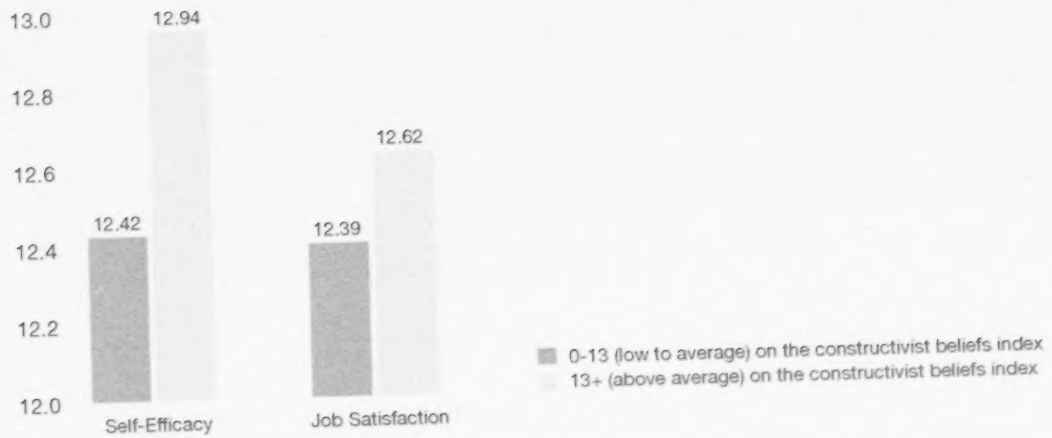
	SELF-EFFICACY	TEACHER JOB SATISFACTION
Teacher constructivist beliefs	• Positive relationship for Alberta and all countries	• Positive relationship for Alberta and all countries
Total number of hours spent on teaching in a week	• No relationship for Alberta • Weak positive relationship for 23 countries	• No relationship for Alberta • Weak negative relationship for 4 countries
Proportion of class time spent on keeping order	• Negative relationship for Alberta and almost all other countries	• Weak negative relationship for Alberta and all other countries
Proportion of class time spent on administrative tasks	• No relationship for Alberta • Weak negative relationship for 12 countries	• Weak negative relationship for Alberta and 15 other countries

Source: OECD TALIS 2013 Database

1 Controlling for teacher gender, experience, educational attainment, formal education or training on content, pedagogy and classroom practice for the subject(s) taught, class size, low academic achievers, students with behavioural problems, and gifted students in each model. Each model was run independently.

TALIS data indicate that in most countries, constructivist beliefs have a positive association with teachers' self-efficacy and job satisfaction. Teachers who report stronger beliefs in constructivist teaching and learning tend to have higher levels of self-efficacy and job satisfaction. The relationship between Alberta teachers' constructivist beliefs and their self-efficacy and job satisfaction is illustrated in Figure 7.16. Teachers who score above average on the constructivist belief index also report higher levels of self-efficacy and job satisfaction.

FIGURE 7.16 The relationship between Alberta teachers' constructivist beliefs and their self-efficacy and job satisfaction

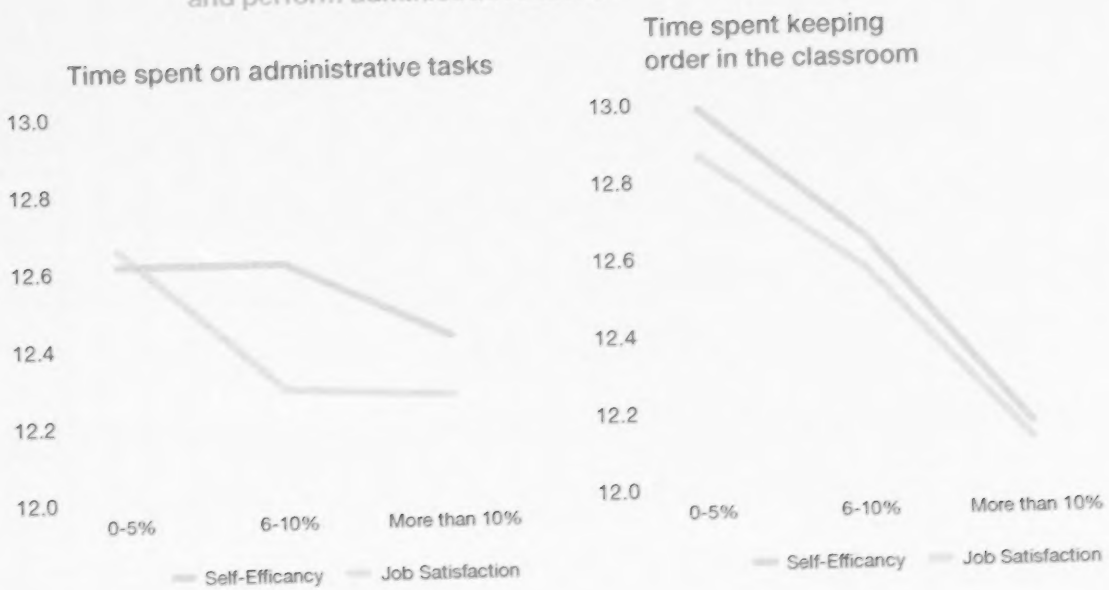


Source: OECD TALIS 2013 Database

Teachers who spend more time keeping order in classroom tend to have lower levels of self-efficacy. Teachers who spend more class time on administrative tasks report lower levels of job satisfaction.

The total number of hours spent on teaching is not significantly related to teacher self-efficacy or job satisfaction in Alberta. However, teachers who spend more time keeping order in the classroom report lower levels of self-efficacy, while those who spend more time on administrative tasks seems to have lower levels of job satisfaction. The impact of the proportion of time spent on keeping order in the classroom appears to be stronger than the impact of the proportion of time spent on administrative tasks. Figure 7.17 illustrates how Alberta teachers' self-efficacy and job satisfaction are related to the amount of class time spent doing administrative tasks and keeping order in the classroom.

FIGURE 7.17 The relationship between Alberta teachers' self-efficacy and job satisfaction and the amount of class time they spend to keep order and perform administrative tasks



7.11 Summary

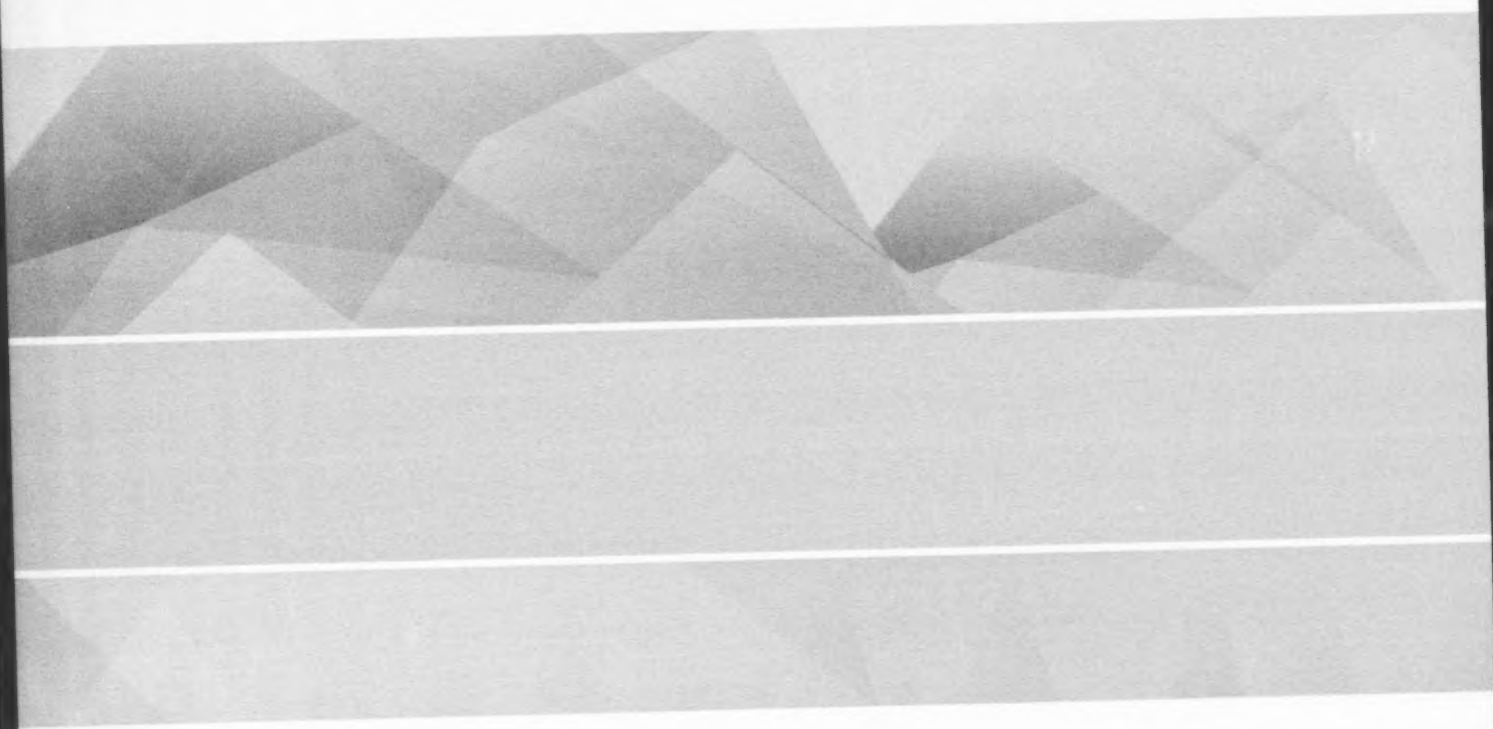
TALIS results suggest that Alberta teachers generally express high levels of self-efficacy and job satisfaction. Alberta teachers' responses to individual self-efficacy and job satisfactions items compare favourably with responses from teachers in other TALIS-participating countries and are above the TALIS average in most cases. Alberta teachers have a higher sense of self-efficacy for classroom management and classroom instruction compared to student engagement. They are also mostly satisfied with their current work environment and their profession. Even though the majority of Alberta teachers are satisfied with their job, many believe that the teaching profession is not valued in society. This is fairly typical for teachers in the vast majority of TALIS-participating countries.

TALIS data show that certain teacher characteristics are related to teacher self-efficacy and job satisfaction. Teaching experience is strongly linked to teacher self-efficacy; teachers whose formal training included content, pedagogy and practice for all the subjects they teach tend to have higher levels of self-efficacy and job satisfaction than those whose formal training included those elements only for some, or none, of the subjects they teach. Teacher self-efficacy was found to be strongly related to teacher job satisfaction when other factors related to teacher characteristics are controlled.

In addition to teacher characteristics, certain classroom and school environment factors are related to teacher self-efficacy and job satisfaction. The size of a class that a teacher teaches does not appear to have any significant relation with either self-efficacy, or job satisfaction. Teachers who teach classes with a significant proportion of students with behavioural problems or low-achieving students tend to express lower levels of job satisfaction. However, teachers whose classes contain higher levels of students with behavioural problems express higher levels of self-efficacy. This is quite unique for Alberta—in most other TALIS countries teachers reported lower levels of self-efficacy when their classes contained high proportions of students with behavioral problems.

Teachers who spend more time keeping order in class or performing administrative tasks tend to report lower levels of job satisfaction. Teachers with stronger beliefs in constructivist teaching strategies tend to have higher levels of self-efficacy and job satisfaction.

Relations that teachers have within their schools were found to be important for teachers' self-efficacy and job satisfaction. Student-teacher relations, teacher cooperation, and distributed leadership have positive relationships with teacher self-efficacy. Teachers who teach in schools where staff are provided opportunities to actively participate in school decisions consistently reported higher levels of job satisfaction. Teachers who are involved in collaborative practices and collaborative professional activities also report higher levels of self-efficacy and job satisfaction. Teachers' perception of feedback and appraisal practices is also linked to their self-efficacy and job satisfaction. When teachers perceive that appraisal and feedback are being provided only for administrative reasons, there is a marked drop in their levels of self-efficacy and job satisfaction.



Alberta
Government